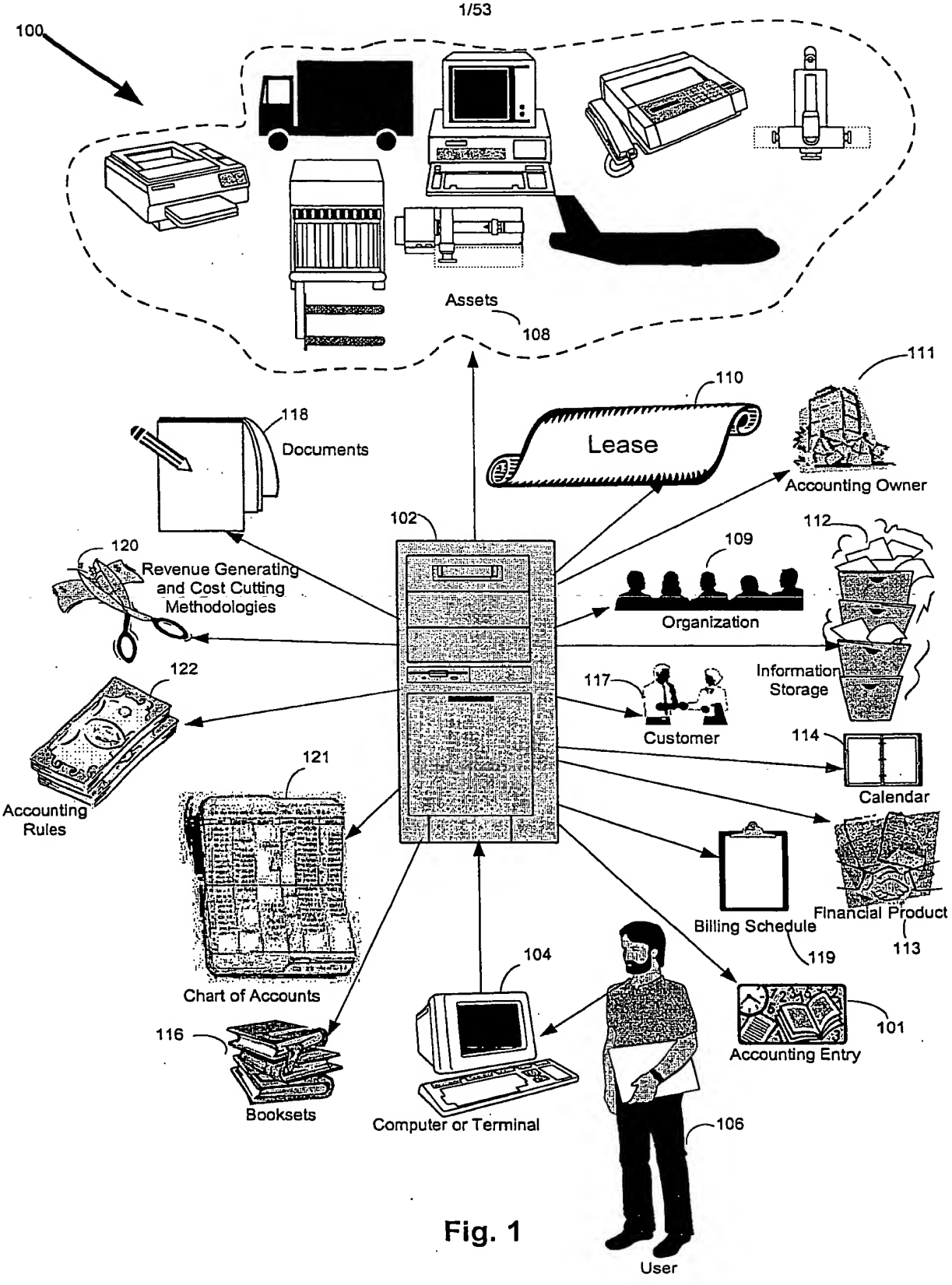


Fig. 1

Docket: 3525.3.3

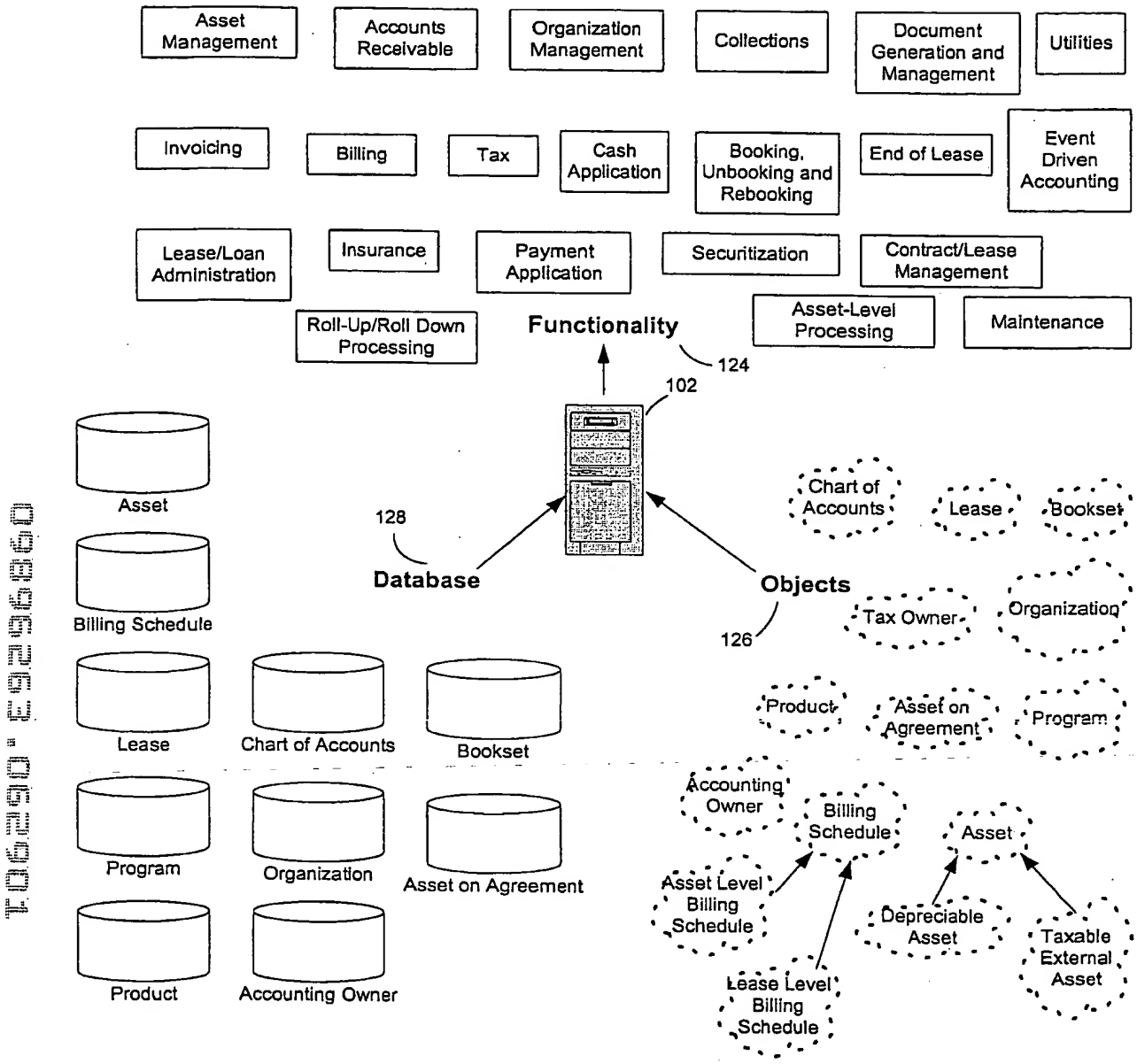

Asset Management
Accounts Receivable
Organization Management
Collections
Document Generation and Management
Utilities
Invoicing
Billing
Tax
Cash Application
Booking, Unbooking and Rebooking
End of Lease
Event Driven Accounting
Lease/Loan Administration
Insurance
Payment Application
Securitization
Contract/Lease Management
Roll-Up/Roll Down Processing
Functionality
124
Asset-Level Processing
Maintenance
102
Asset
Billing Schedule
128
Database
Objects
126
Chart of Accounts
Lease
Bookset
Tax Owner
Organization
Product
Asset on Agreement
Program
Lease
Chart of Accounts
Bookset
Program
Organization
Asset on Agreement
Product
Accounting Owner
Accounting Owner
Billing Schedule
Asset
Asset Level Billing Schedule
Depreciable Asset
Taxable External Asset
Lease Level Billing Schedule

Fig. 2

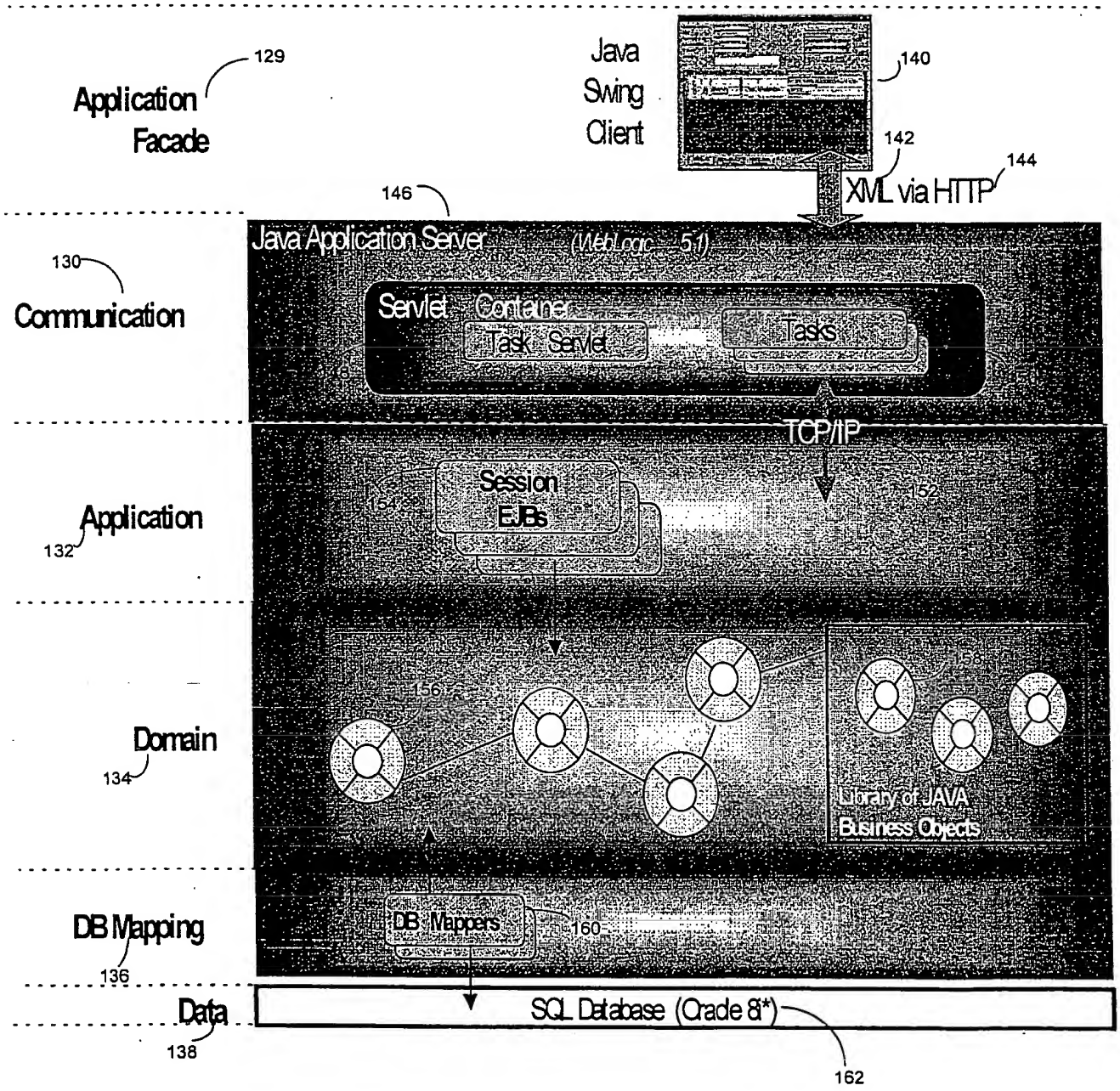

Application Facade
129
Java Swing Client
140
142
144
XML via HTTP
146
Java Application Server (WebLogic 5.1)
130
Communication
Servlet Container
Task Servlet
Tasks
TCP/IP
Application
132
Session EJBs
154
152
Domain
134
156
158
Library of JAVA Business Objects
DB Mapping
136
DB Mappers
160
Data
138
SQL Database (Oracle 8i*)
162

Fig. 3a

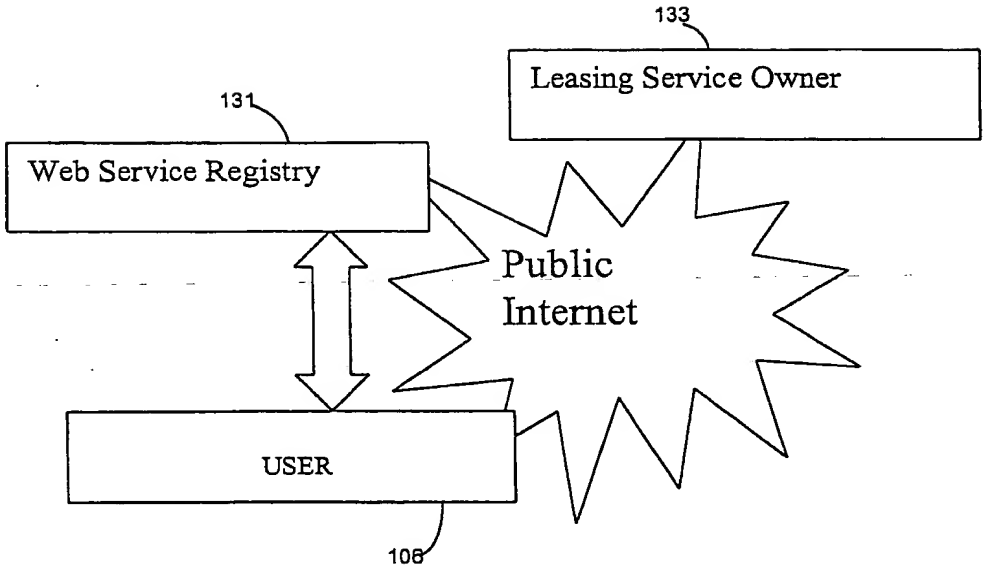

133
Leasing Service Owner
131
Web Service Registry
Public
Internet
USER
108

Fig. 3b

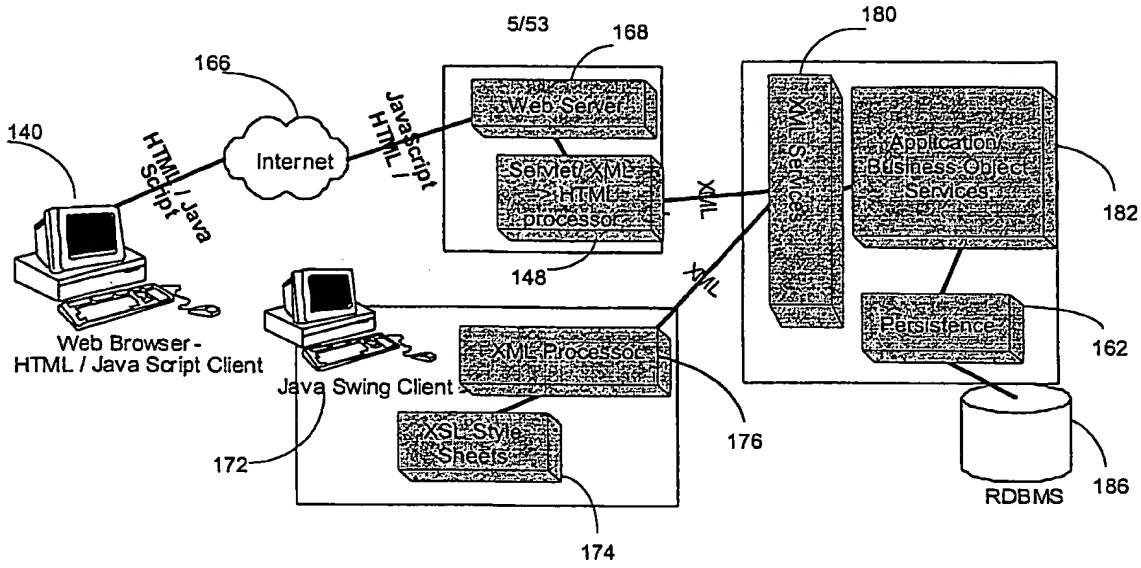

140
166
Internet
HTML / Java Script
JavaScript HTML /
168
Web Server
Servlet/XML + HTML processor
148
180
XML Services
Application/ Business Object Services
182
XML
XML
Persistence
162
Web Browser - HTML / Java Script Client
Java Swing Client
XML Processor
176
XSL Style Sheets
172
174
RDBMS
186

Fig. 4

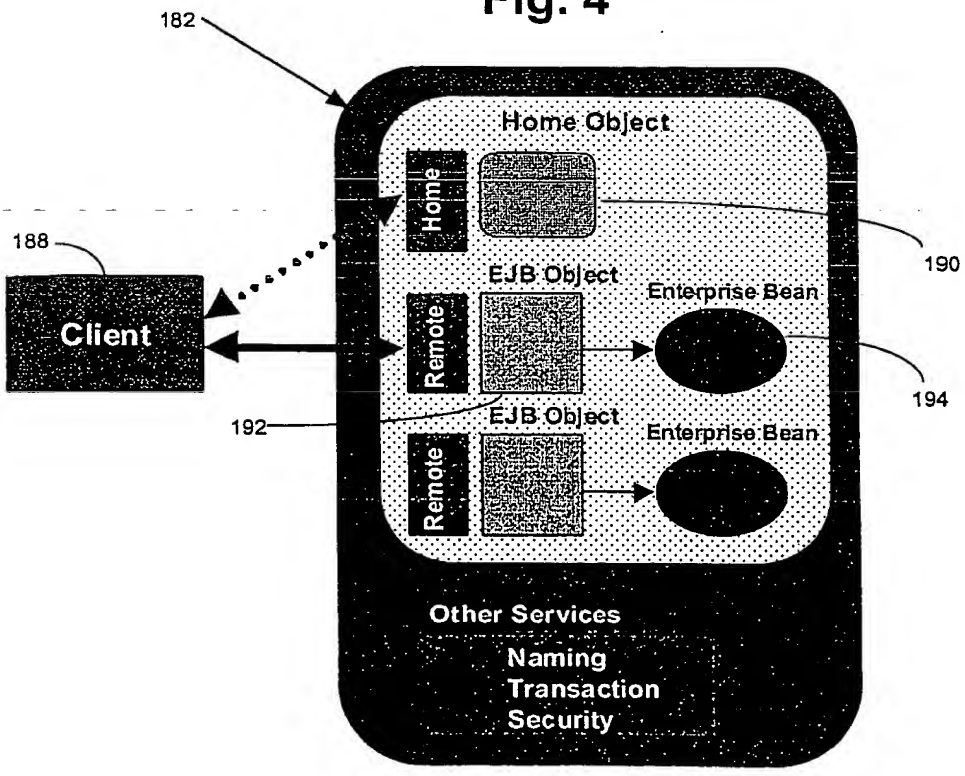

182
Home Object
Home
190
188
Client
EJB Object
Enterprise Bean
Remote
194
192
EJB Object
Enterprise Bean
Remote
Other Services
Naming
Transaction
Security

Fig. 5

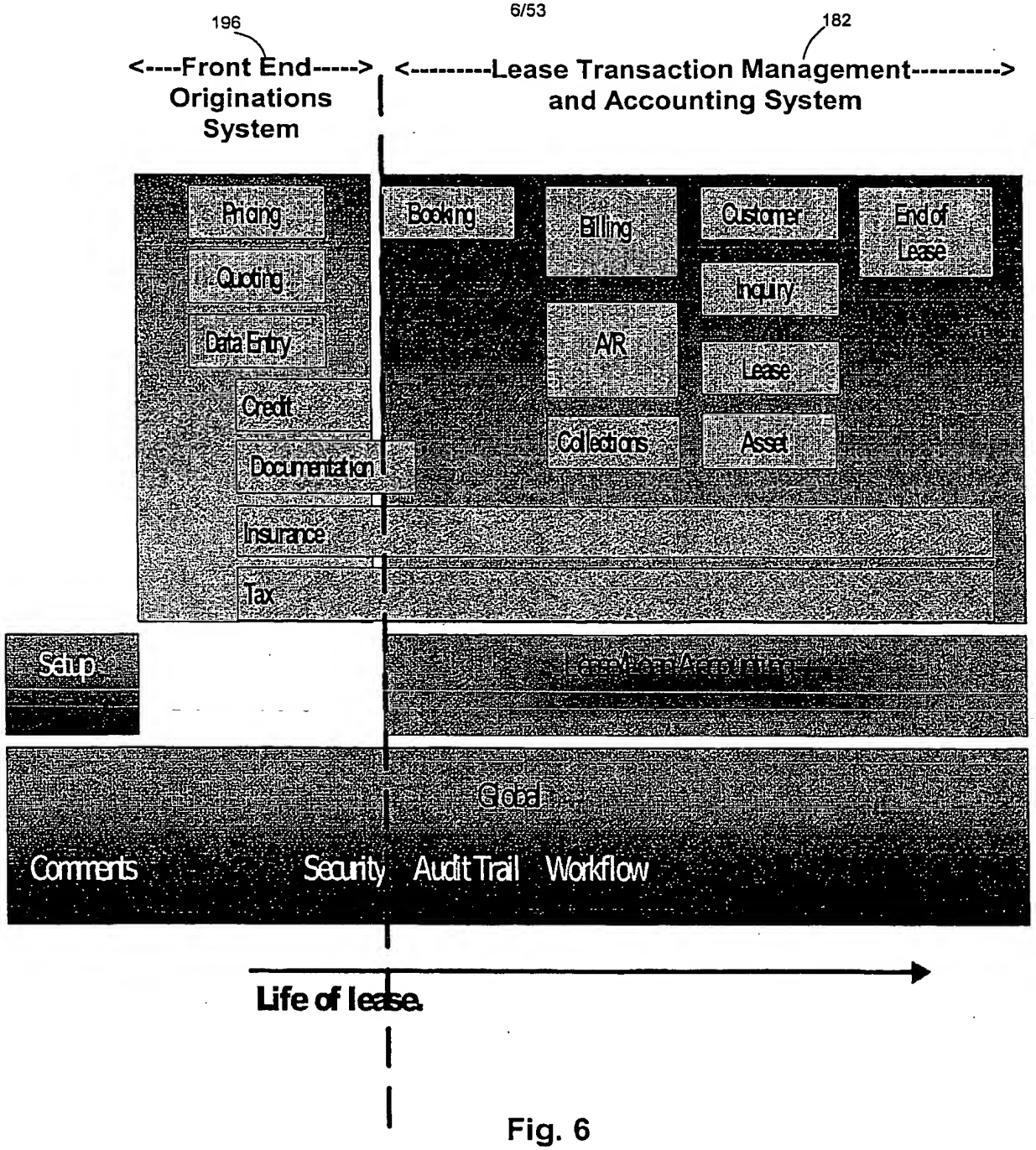

196
182
<----Front End----->
Originations
System
<---------Lease Transaction Management---------->
and Accounting System
Pricing
Booking
Billing
Customer
End of
Lease
Quoting
Inquiry
Data Entry
A/R
Lease
Credit
Collections
Asset
Documentation
Insurance
Tax
Setup
Lease/Loan Accounting
Global
Comments
Security
Audit Trail
Workflow
Life of lease

Fig. 6

T06290 "E9296860

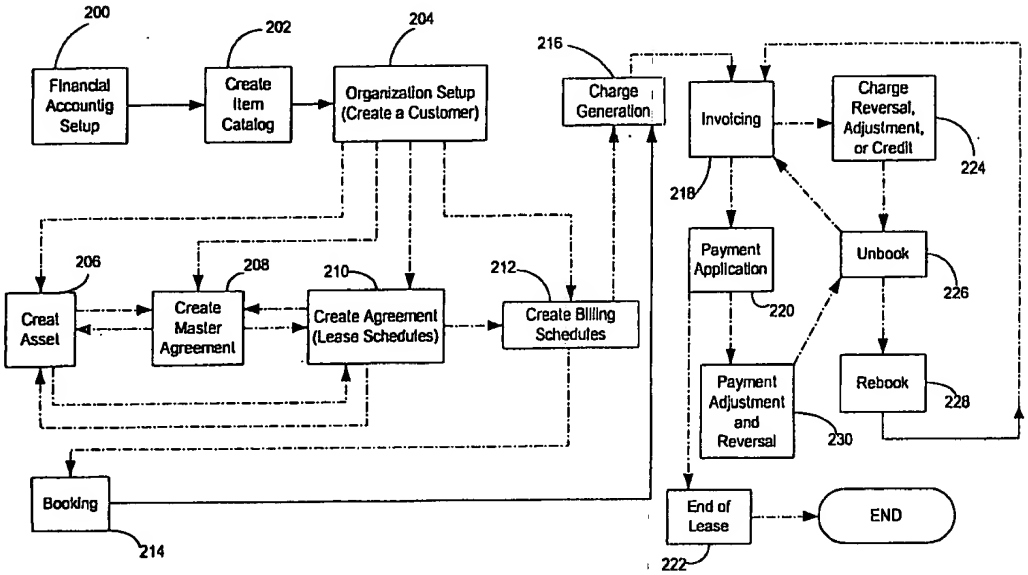


Fig. 7

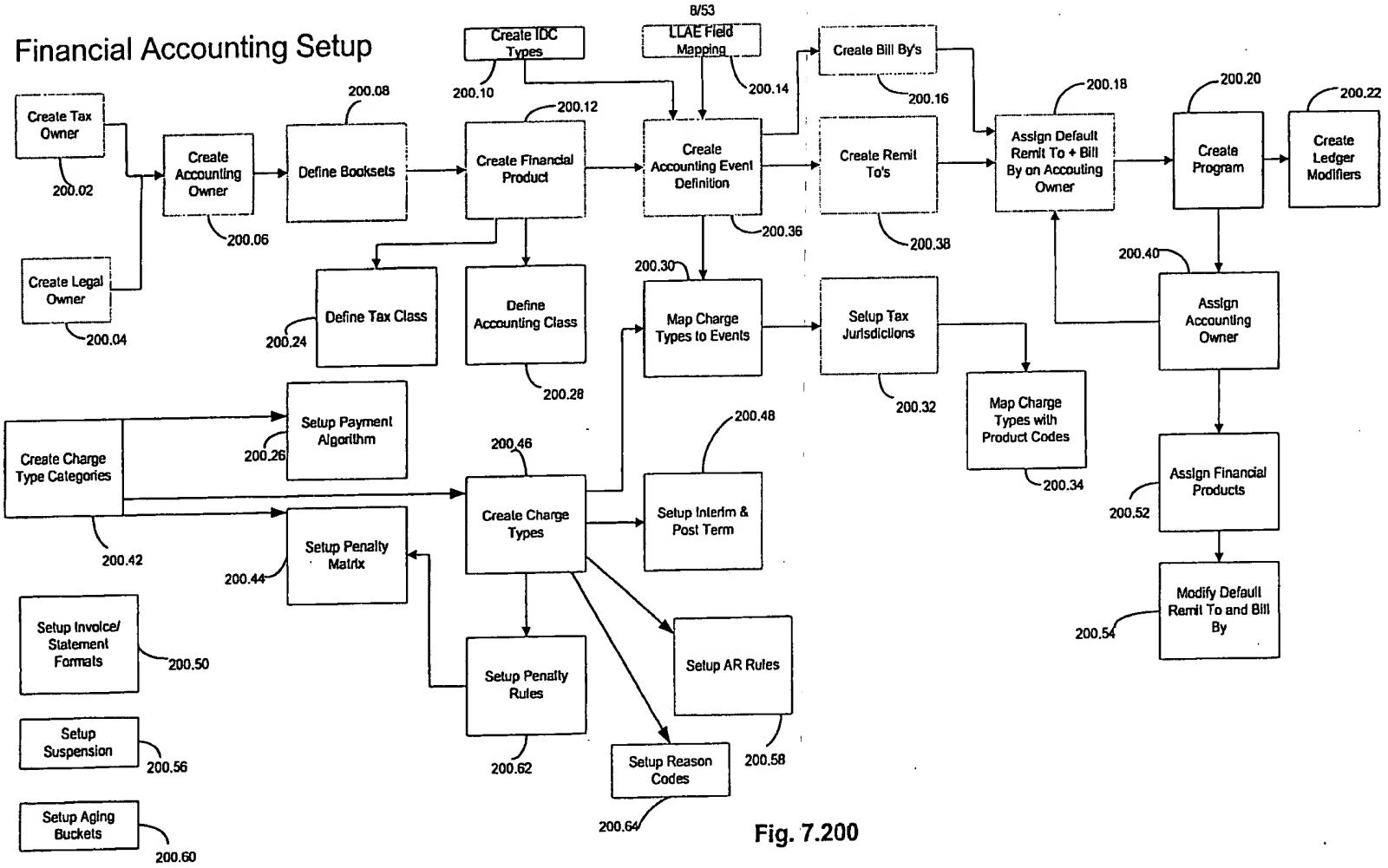

Financial Accounting Setup
Create Tax Owner
200.02
Create Legal Owner
200.04
Create Accounting Owner
200.06
200.08
Define Booksets
Create IDC Types
200.10
200.12
Create Financial Product
LLAE Field Mapping
200.14
Create Accounting Event Definition
200.36
Create Bill By's
200.16
Create Remit To's
200.38
200.18
Assign Default Remit To + Bill By on Accouting Owner
200.20
Create Program
200.22
Create Ledger Modifiers
200.40
Assign Accounting Owner
200.24
Define Tax Class
Define Accounting Class
200.28
200.30
Map Charge Types to Events
Setup Tax Jurisdictions
200.32
Map Charge Types with Product Codes
200.34
Create Charge Type Categories
200.42
Setup Payment Algorithm
200.26
Setup Penalty Matrix
200.44
200.46
Create Charge Types
200.48
Setup Interim & Post Term
Assign Financial Products
200.52
Modify Default Remit To and Bill By
200.54
Setup Invoice/ Statement Formats
200.50
Setup Suspension
200.56
Setup Aging Buckets
200.60
Setup Penalty Rules
200.62
Setup AR Rules
200.58
Setup Reason Codes
200.64

Fig. 7.200

T06290 "E929686D

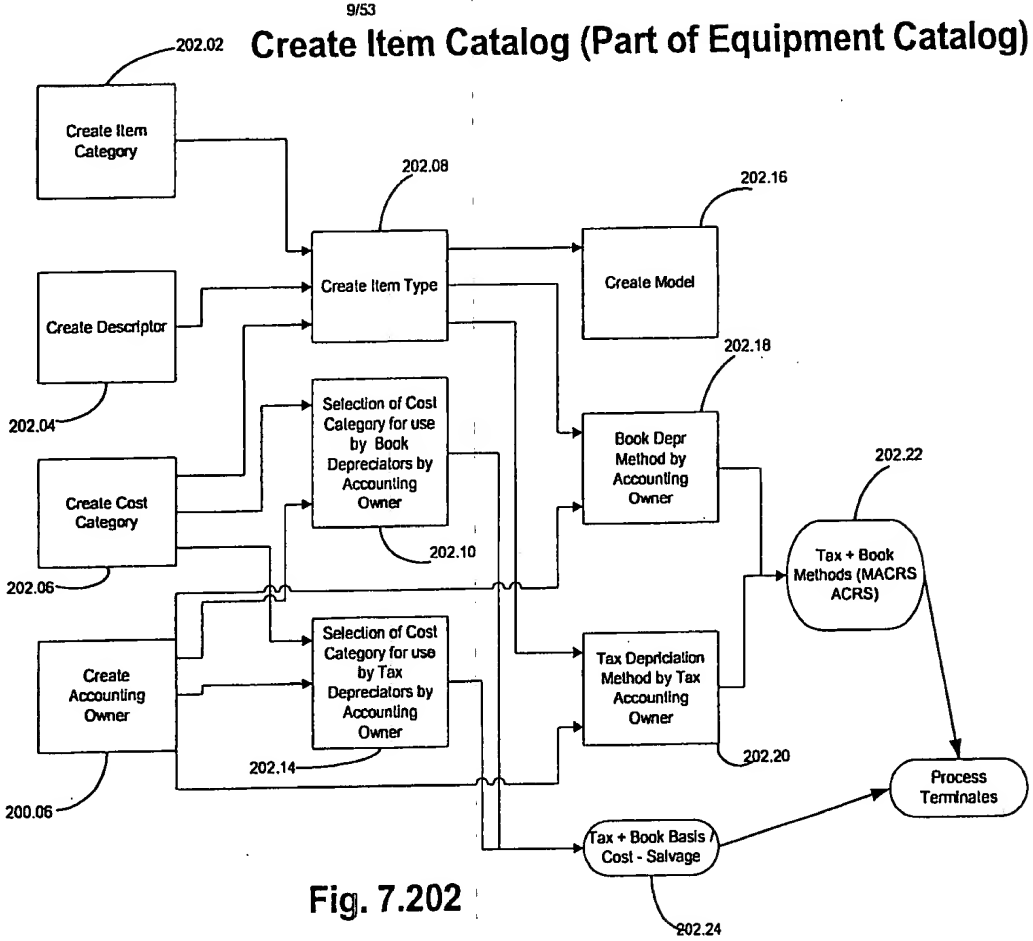


Fig. 7.202

T06250 E9296860

Organization Setup (Create a Customer)

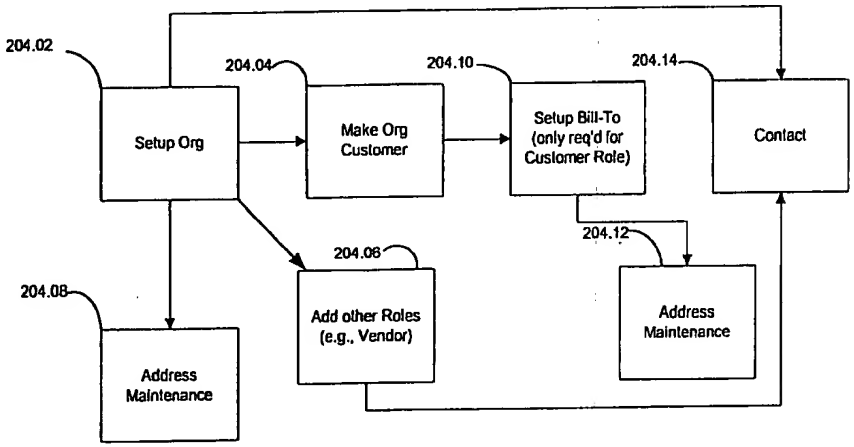


Fig. 7.204

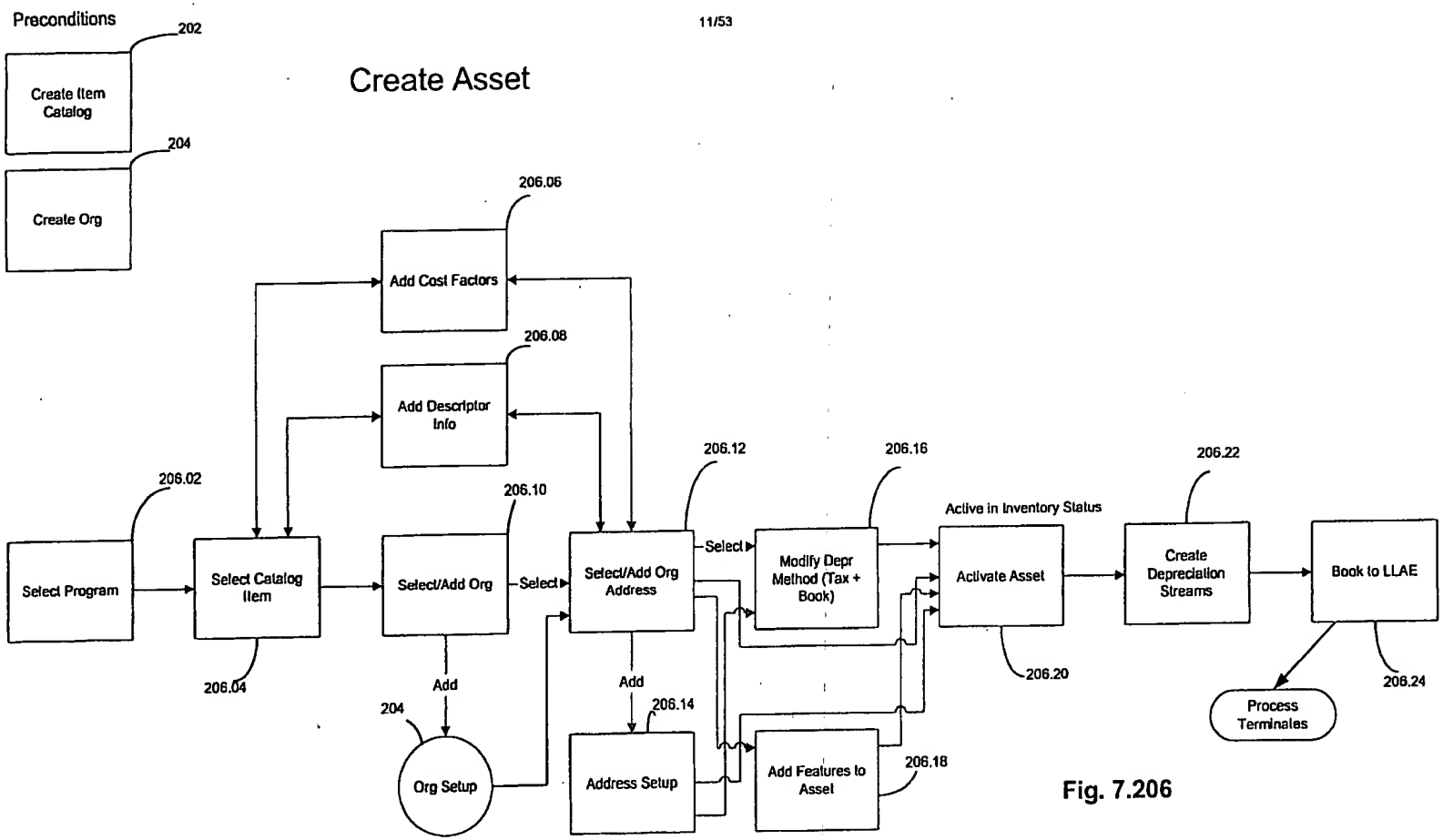

Preconditions
202
Create Item Catalog
204
Create Org
Create Asset
206.06
Add Cost Factors
206.08
Add Descriptor Info
206.02
Select Program
Select Catalog Item
206.04
206.10
Select/Add Org
Select
206.12
Select/Add Org Address
Select
206.16
Modify Depr Method (Tax + Book)
Active in Inventory Status
Activate Asset
206.20
206.22
Create Depreciation Streams
Book to LLAE
206.24
Process Terminates
Add
204
Org Setup
Add
206.14
Address Setup
Add Features to Asset
206.18

Fig. 7.206

T06290 E9296860

Create Master Agreement

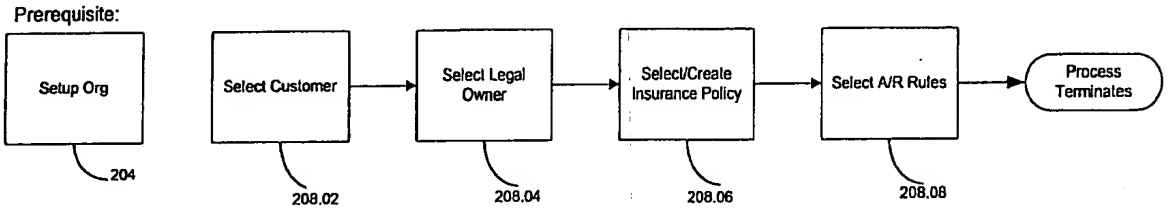


Fig. 7.208

Create Agreement (Lease Schedule)

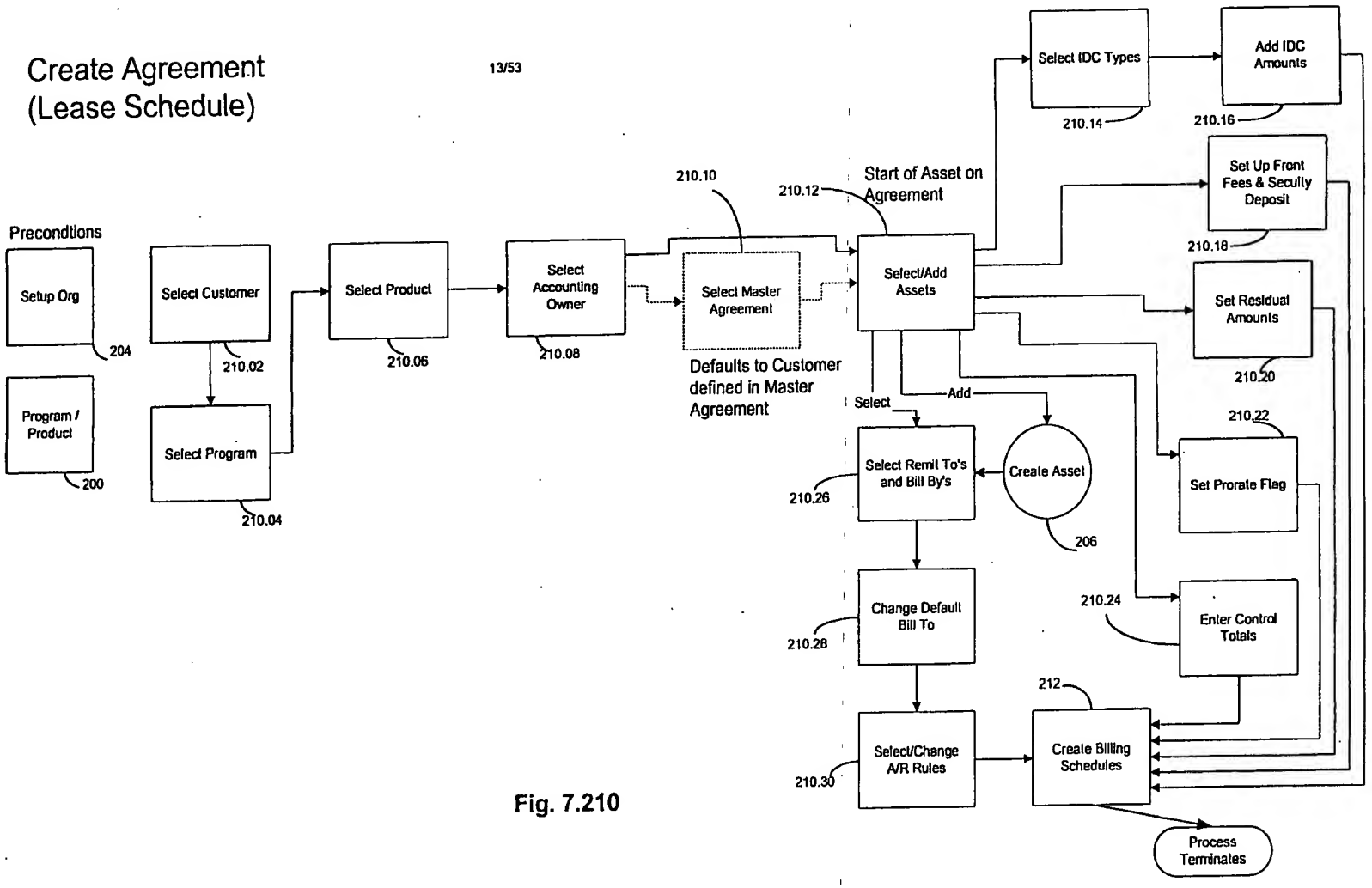


Fig. 7.210

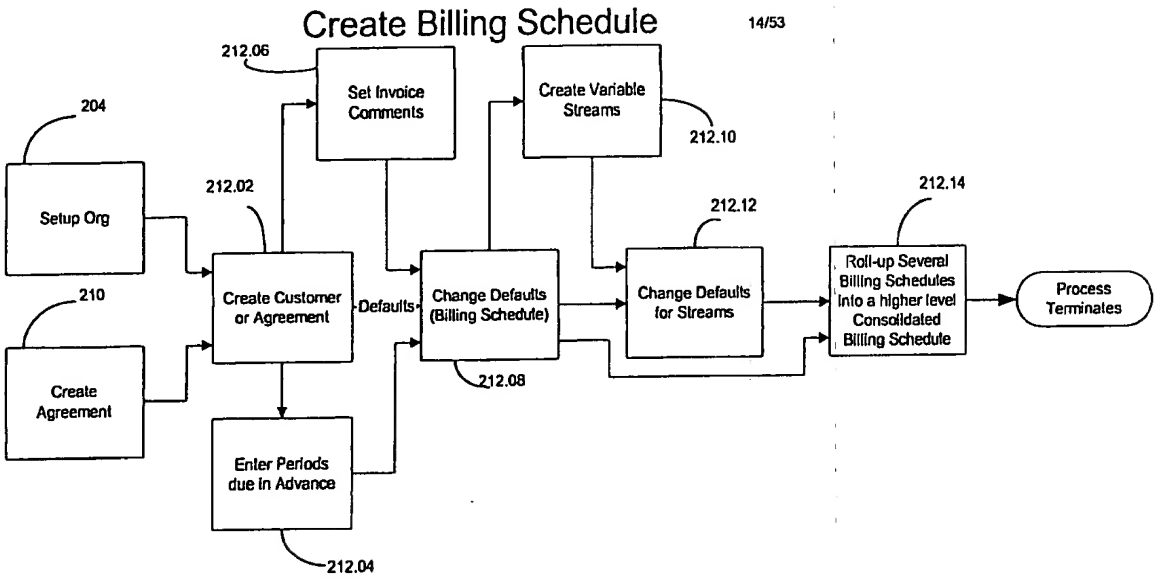

Create Billing Schedule
14/53
212.06
Set Invoice Comments
Create Variable Streams
212.10
204
Setup Org
212.02
212.12
212.14
Create Customer or Agreement
Defaults
Change Defaults (Billing Schedule)
Change Defaults for Streams
Roll-up Several Billing Schedules into a higher level Consolidated Billing Schedule
Process Terminates
210
Create Agreement
212.08
Enter Periods due in Advance
212.04

Fig. 7.212

Booking

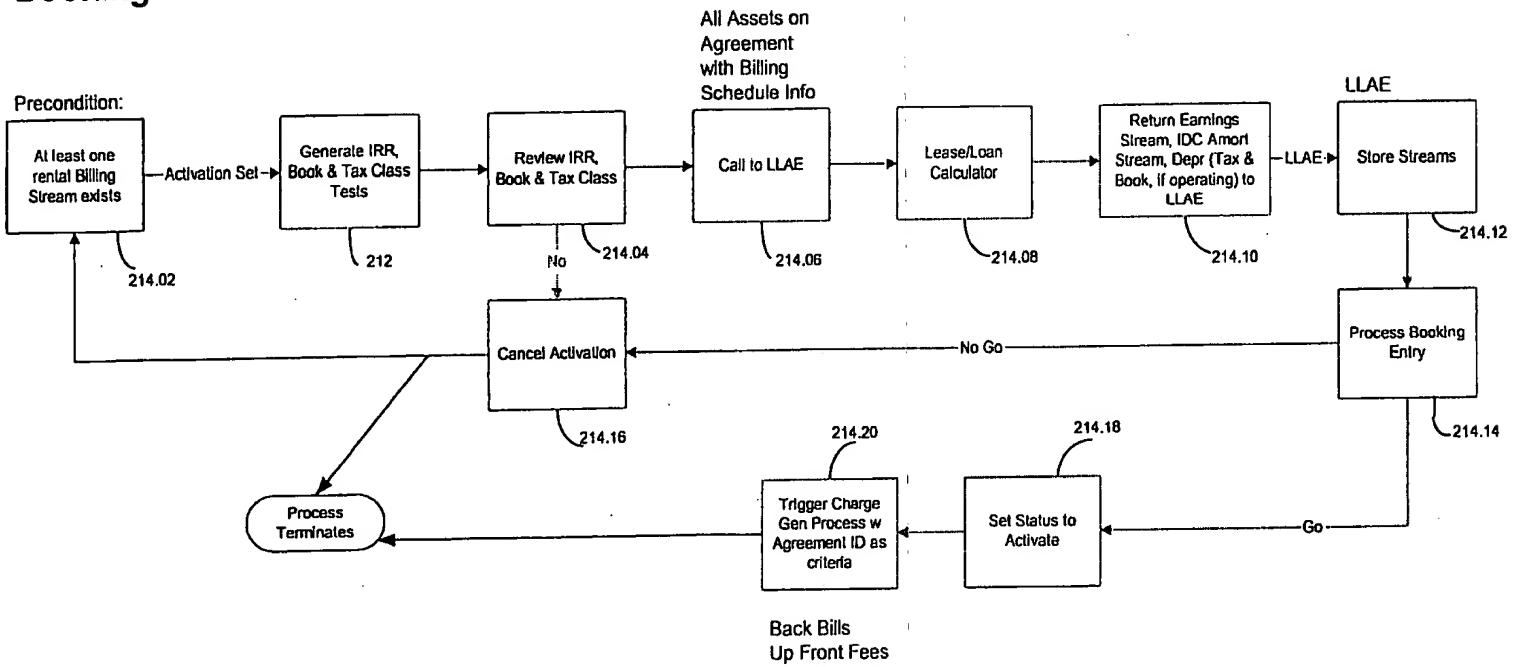


Fig. 7.214

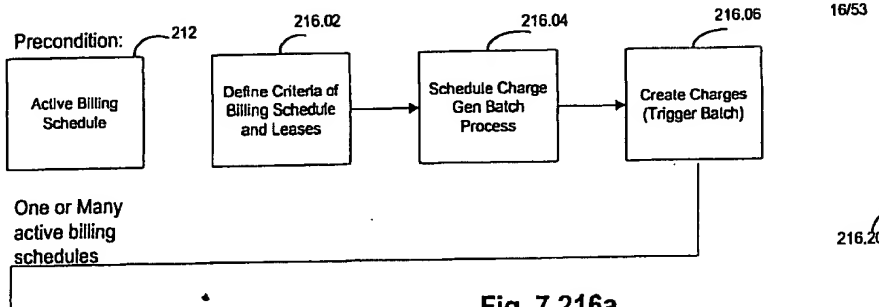


Fig. 7.216a

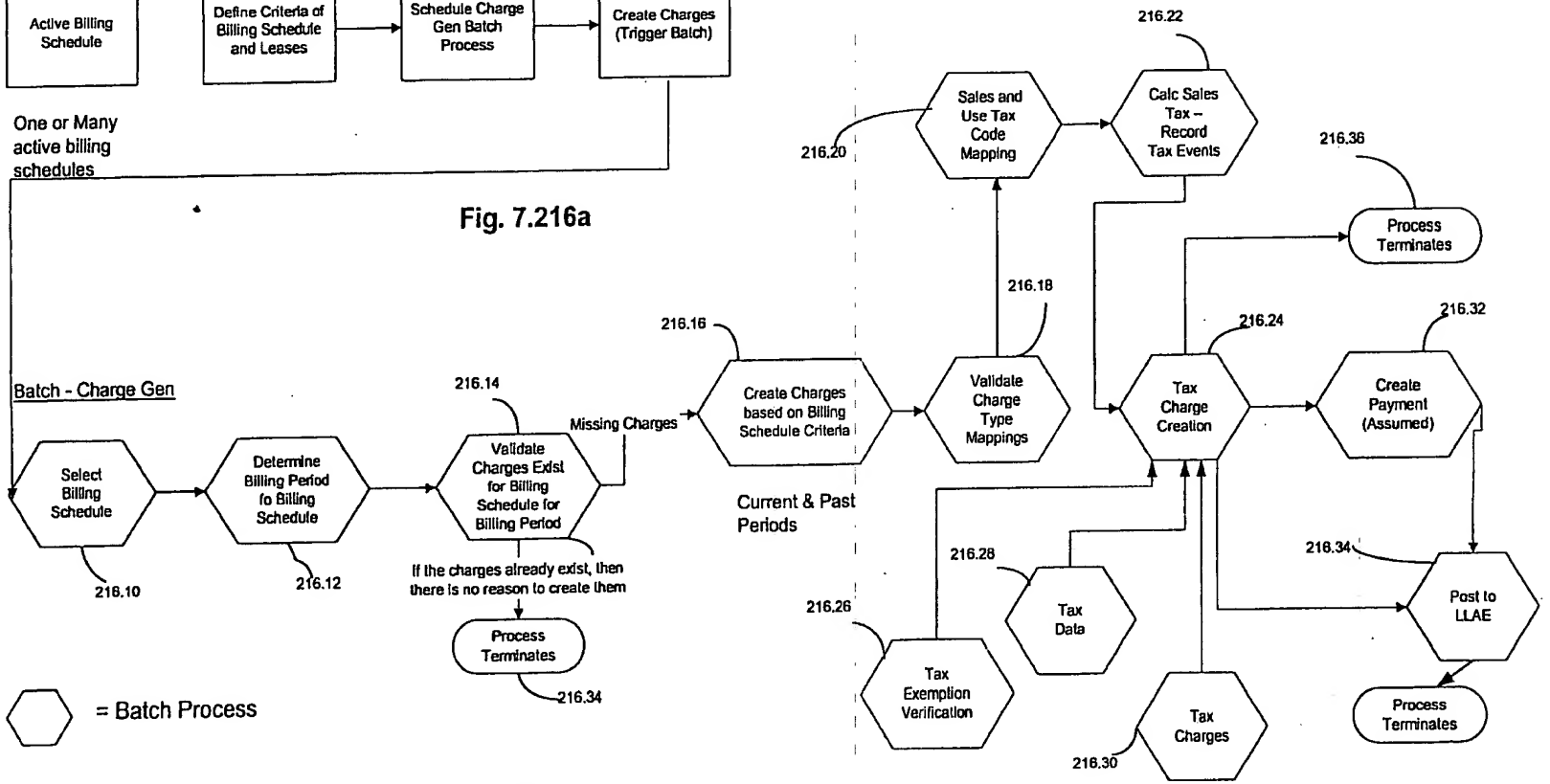


Fig. 7.216b

Charge Generation for Billing

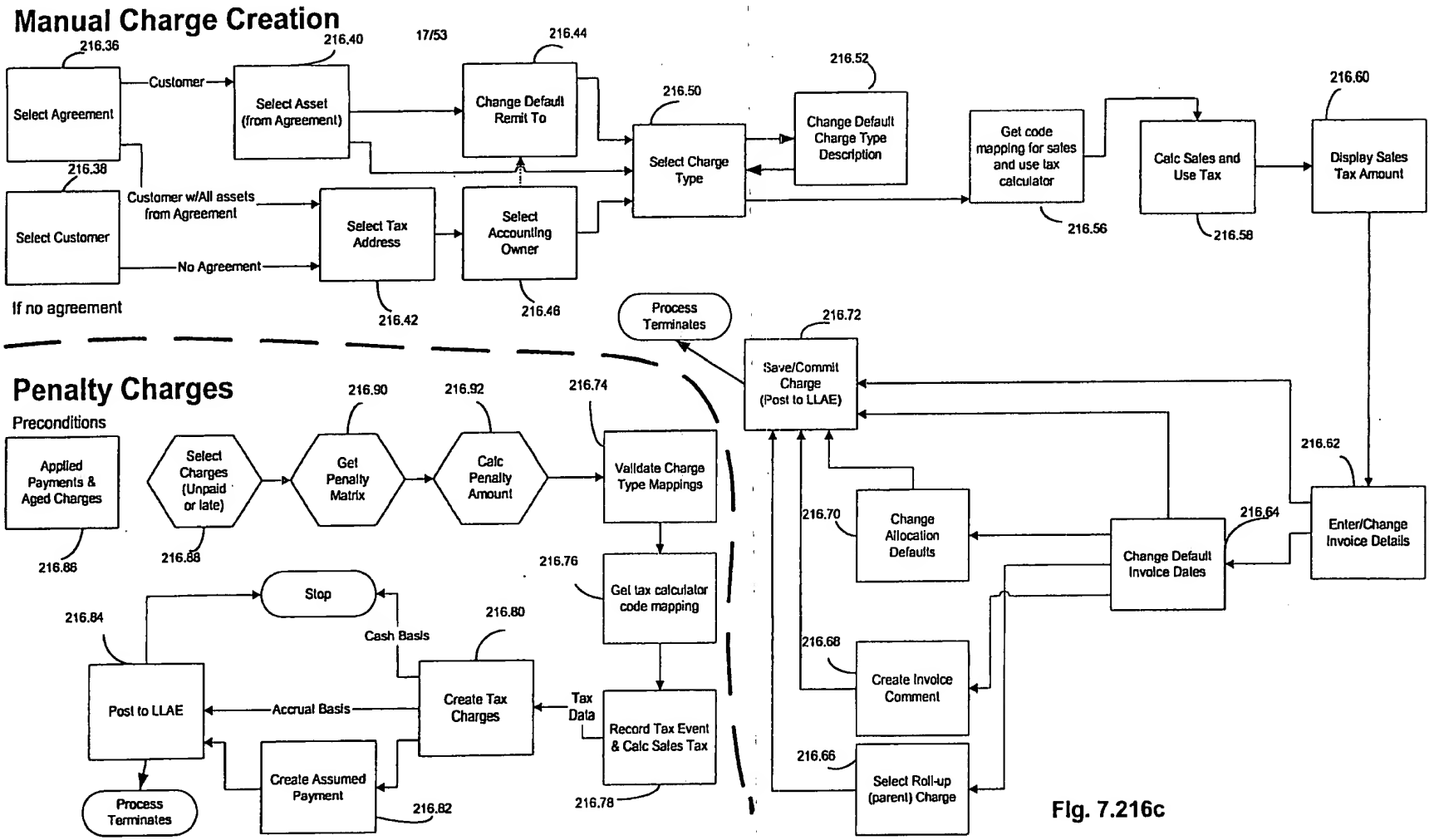

Manual Charge Creation
17/53
216.36
Select Agreement
Customer
216.40
Select Asset (from Agreement)
216.44
Change Default Remit To
216.50
Select Charge Type
216.52
Change Default Charge Type Description
Get code mapping for sales and use tax calculator
216.56
Calc Sales and Use Tax
216.58
216.60
Display Sales Tax Amount
216.38
Select Customer
Customer w/All assets from Agreement
No Agreement
Select Tax Address
216.42
Select Accounting Owner
216.46
If no agreement
Process Terminates
216.72
Save/Commit Charge (Post to LLAE)
Penalty Charges
Preconditions
Applied Payments & Aged Charges
216.86
Select Charges (Unpaid or late)
216.88
216.90
Get Penalty Matrix
216.92
Calc Penalty Amount
216.74
Validate Charge Type Mappings
216.62
Enter/Change Invoice Details
216.70
Change Allocation Defaults
216.64
Change Default Invoice Dates
216.76
Get tax calculator code mapping
Stop
216.84
Cash Basis
216.80
Post to LLAE
Accrual Basis
Create Tax Charges
Tax Data
Record Tax Event & Calc Sales Tax
216.68
Create Invoice Comment
216.66
Select Roll-up (parent) Charge
Process Terminates
Create Assumed Payment
216.82
216.78

Fig. 7.216c

Import Charges

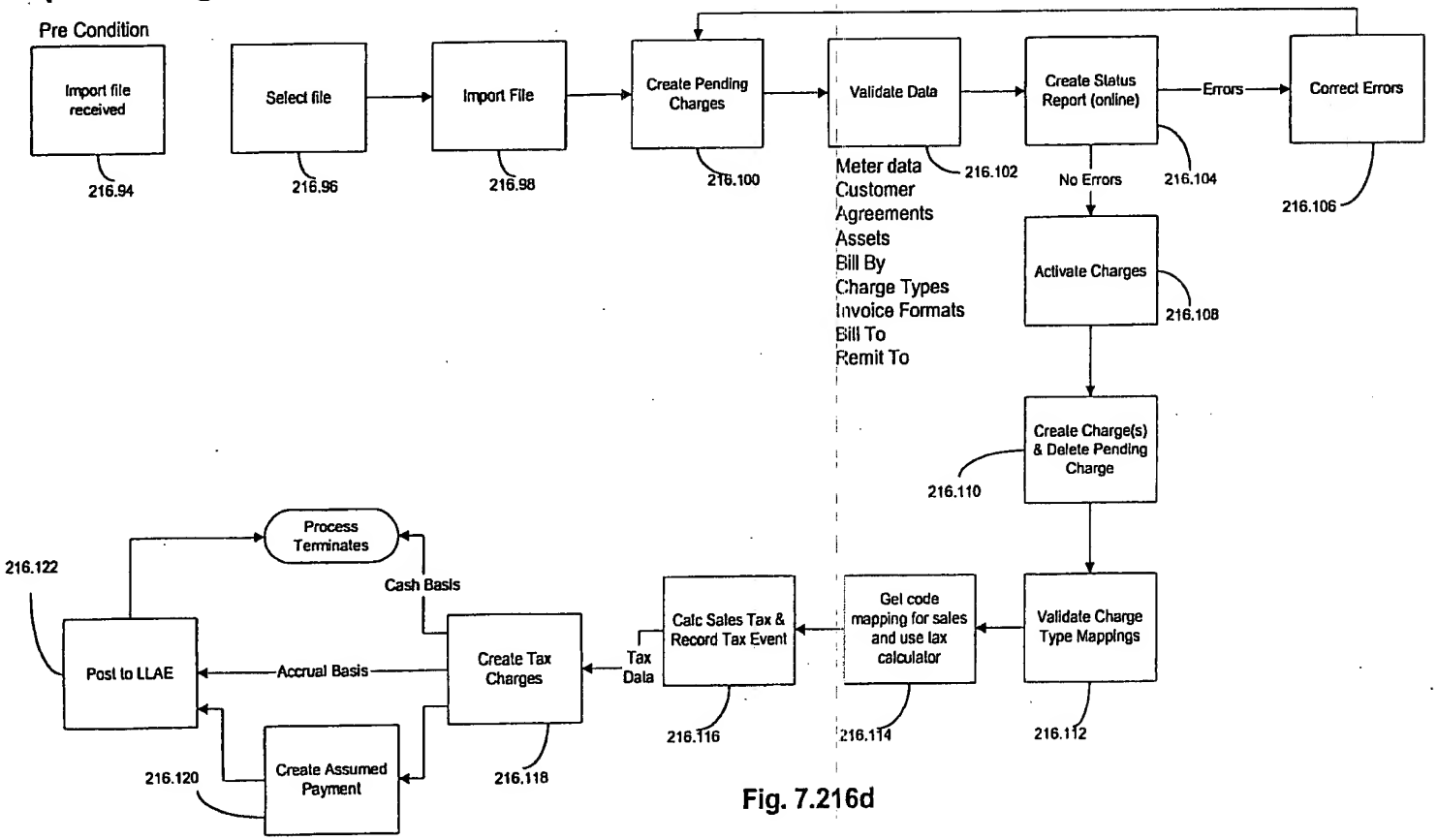


Fig. 7.216d

Invoicing

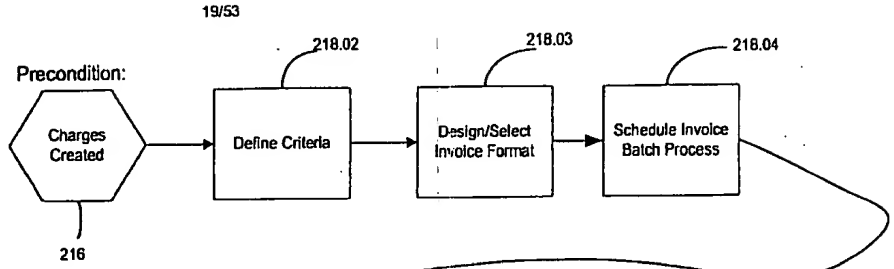
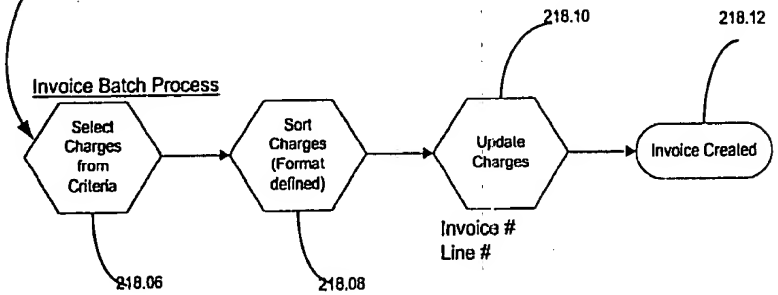


Fig. 7.218a



= Batch Process

Fig. 7.218b

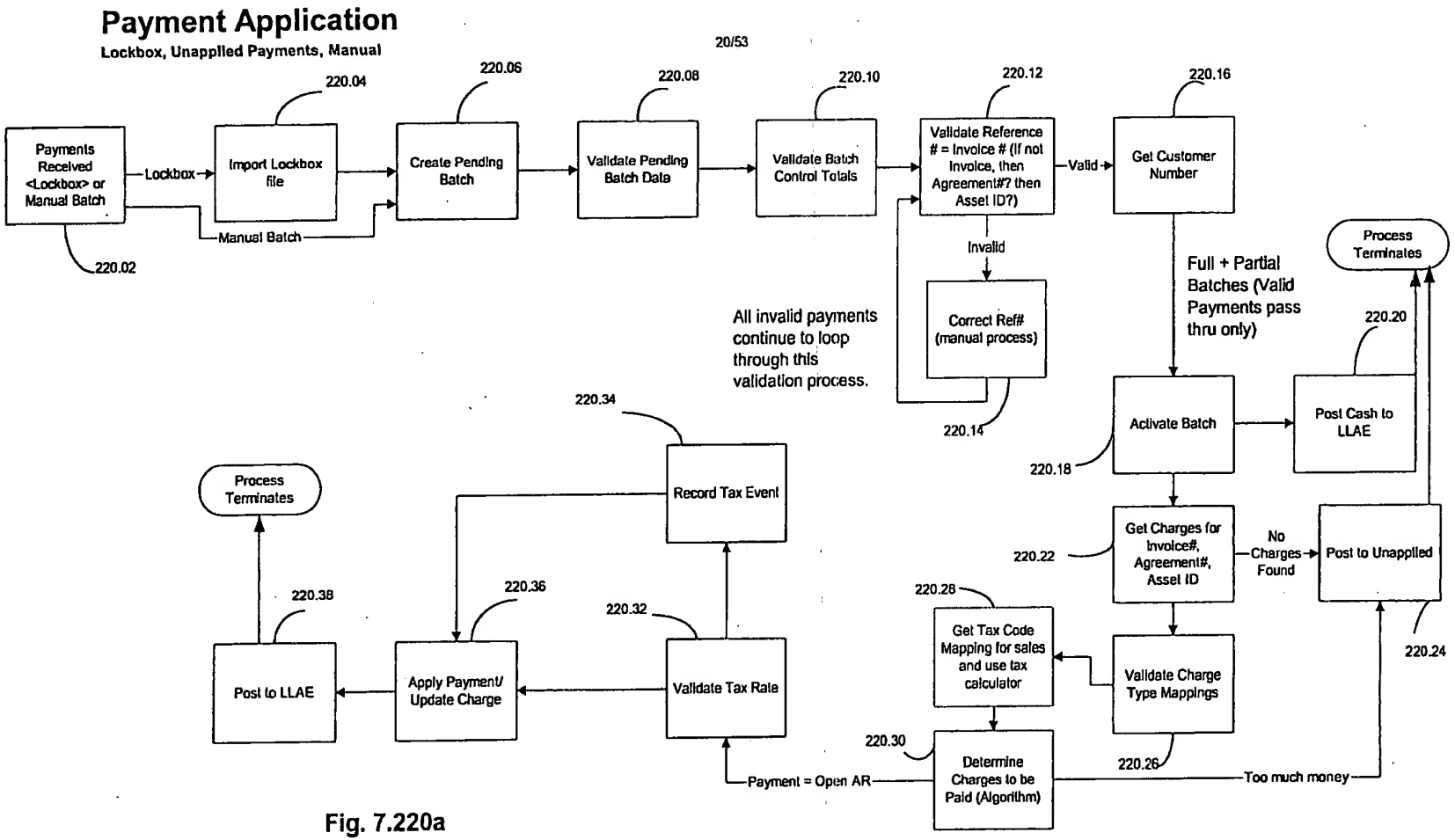

Payment Application
Lockbox, Unapplied Payments, Manual
Payments Received <Lockbox> or Manual Batch
220.02
Lockbox
Import Lockbox file
220.04
Manual Batch
Create Pending Batch
220.06
Validate Pending Batch Data
220.08
Validate Batch Control Totals
220.10
Validate Reference # = Invoice # (If not Invoice, then Agreement#? then Asset ID?)
220.12
Valid
Get Customer Number
220.16
Invalid
Correct Ref# (manual process)
220.14
All invalid payments continue to loop through this validation process.
Full + Partial Batches (Valid Payments pass thru only)
Process Terminates
220.20
Activate Batch
220.18
Post Cash to LLAE
Get Charges for Invoice#, Agreement#, Asset ID
220.22
No Charges Found
Post to Unapplied
220.24
Get Tax Code Mapping for sales and use tax calculator
220.28
Validate Charge Type Mappings
220.26
Determine Charges to be Paid (Algorithm)
220.30
Too much money
Payment = Open AR
Validate Tax Rate
220.32
Apply Payment/ Update Charge
220.36
Post to LLAE
220.38
Process Terminates
Record Tax Event
220.34

Fig. 7.220a

Auto Pay

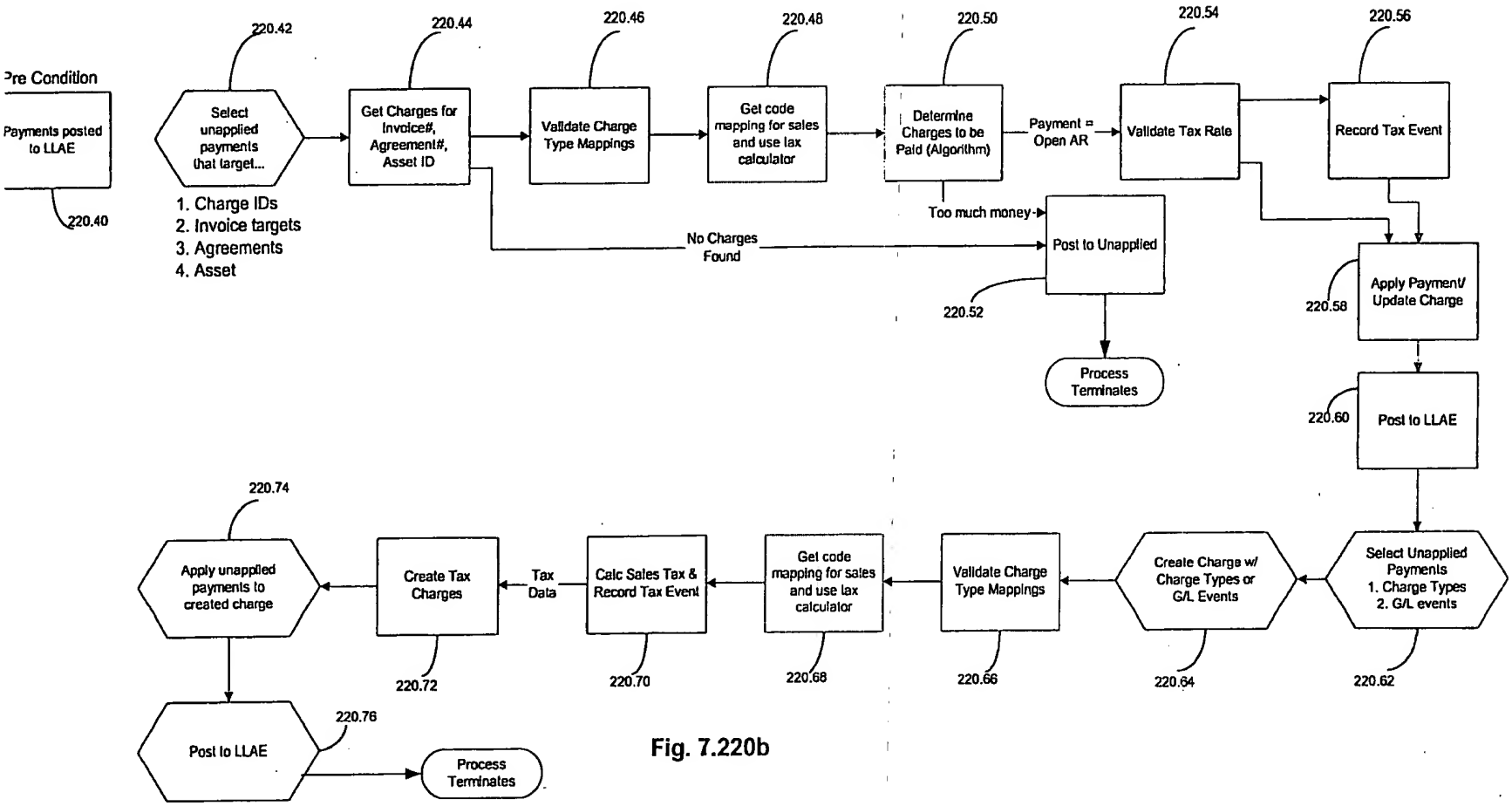


Fig. 7.220b

Manual Payment

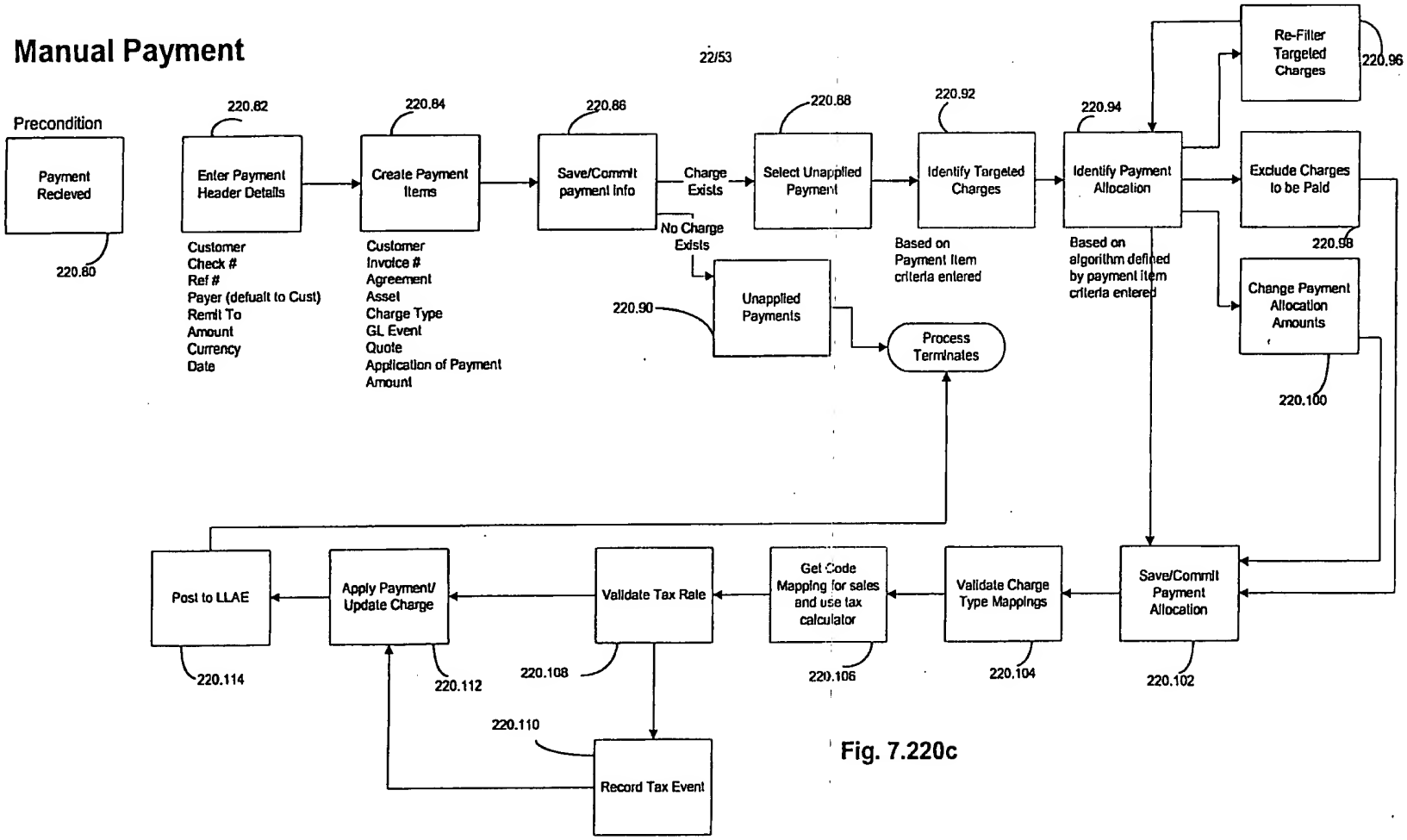


Fig. 7.220c

End of Lease/Lease Termination Process

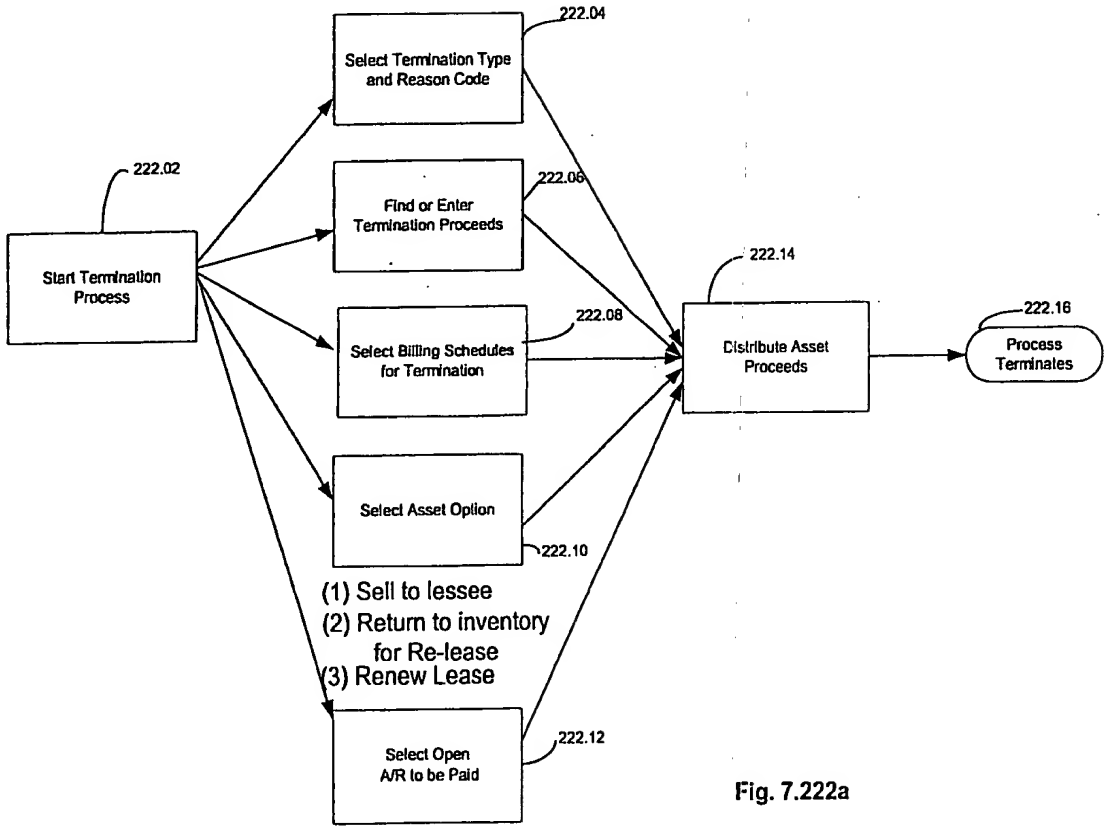


Fig. 7.222a

Asset Return to Inventory

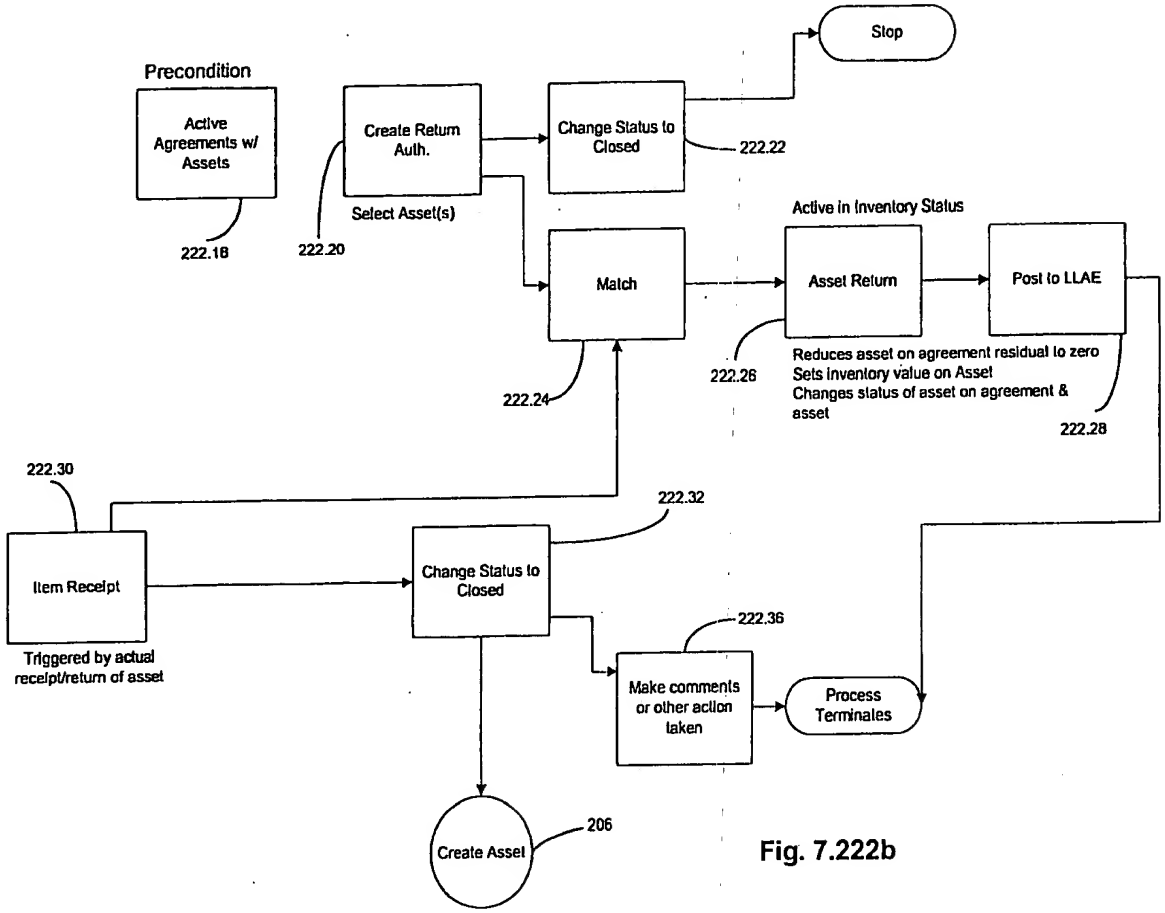


Fig. 7.222b

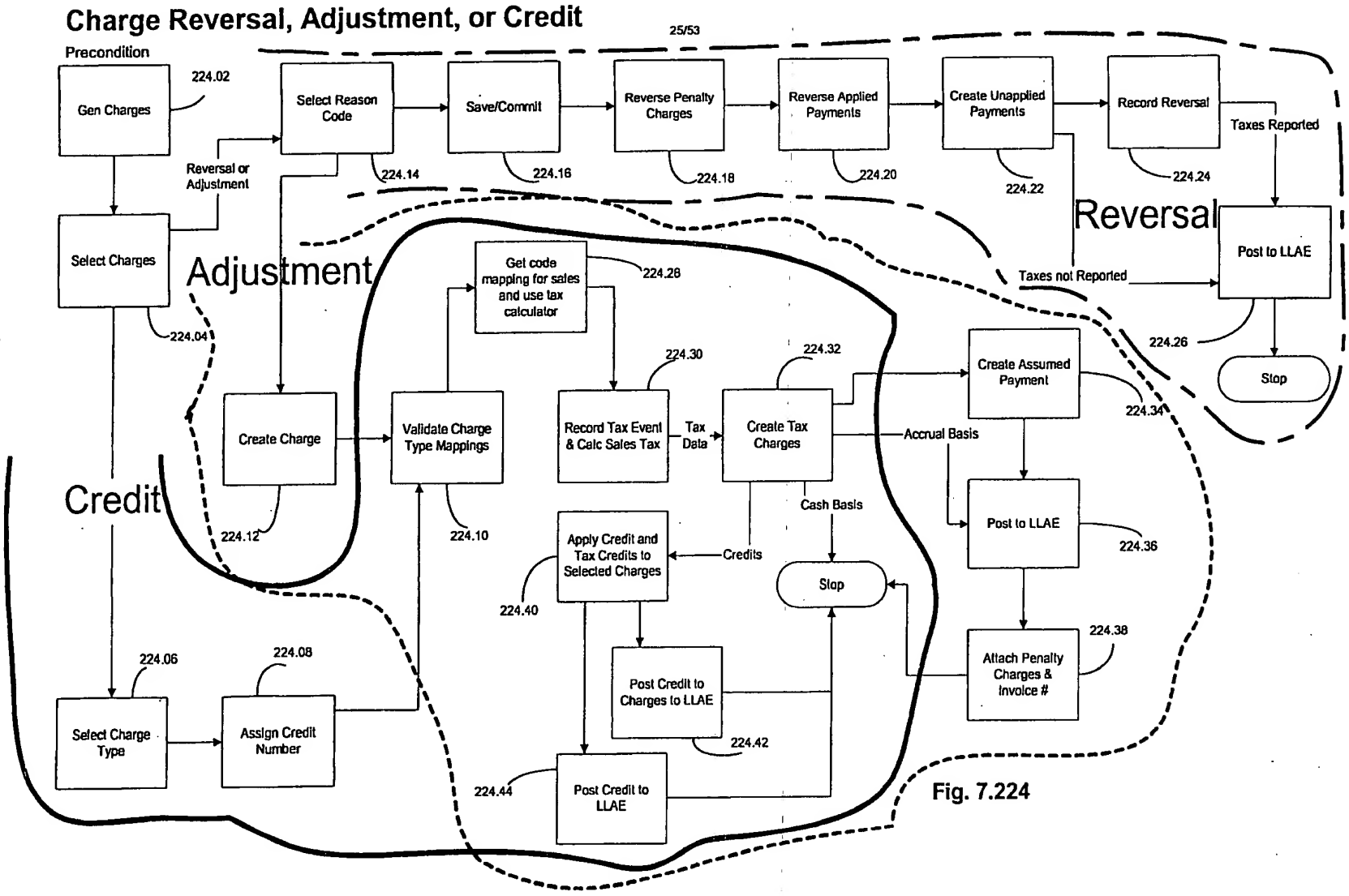

Charge Reversal, Adjustment, or Credit
Precondition
25/53
Gen Charges
224.02
Select Reason Code
Save/Commit
Reverse Penalty Charges
Reverse Applied Payments
Create Unapplied Payments
Record Reversal
Taxes Reported
Reversal or Adjustment
224.14
224.16
224.18
224.20
224.22
224.24
Reversal
Select Charges
Adjustment
Get code mapping for sales and use tax calculator
224.28
Post to LLAE
Taxes not Reported
224.04
224.26
Stop
224.30
224.32
Create Assumed Payment
224.34
Create Charge
Validate Charge Type Mappings
Record Tax Event & Calc Sales Tax
Tax Data
Create Tax Charges
Accrual Basis
Credit
224.12
224.10
Cash Basis
Post to LLAE
224.36
Apply Credit and Tax Credits to Selected Charges
Credits
Stop
224.40
224.38
Attach Penalty Charges & Invoice #
224.06
224.08
Post Credit to Charges to LLAE
Select Charge Type
Assign Credit Number
224.42
224.44
Post Credit to LLAE

Fig. 7.224

Unbook

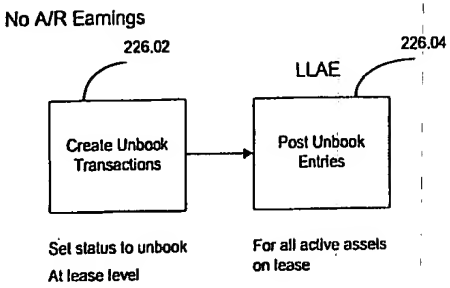


Fig. 7.226a

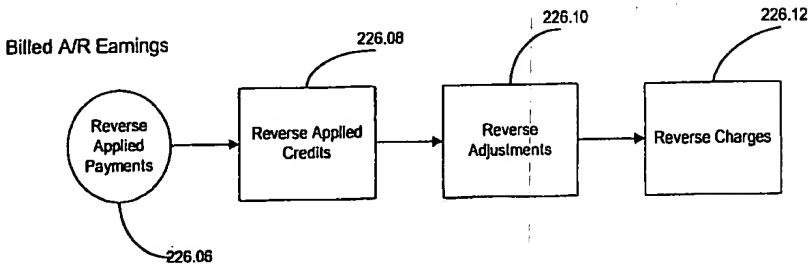


Fig. 7.226b

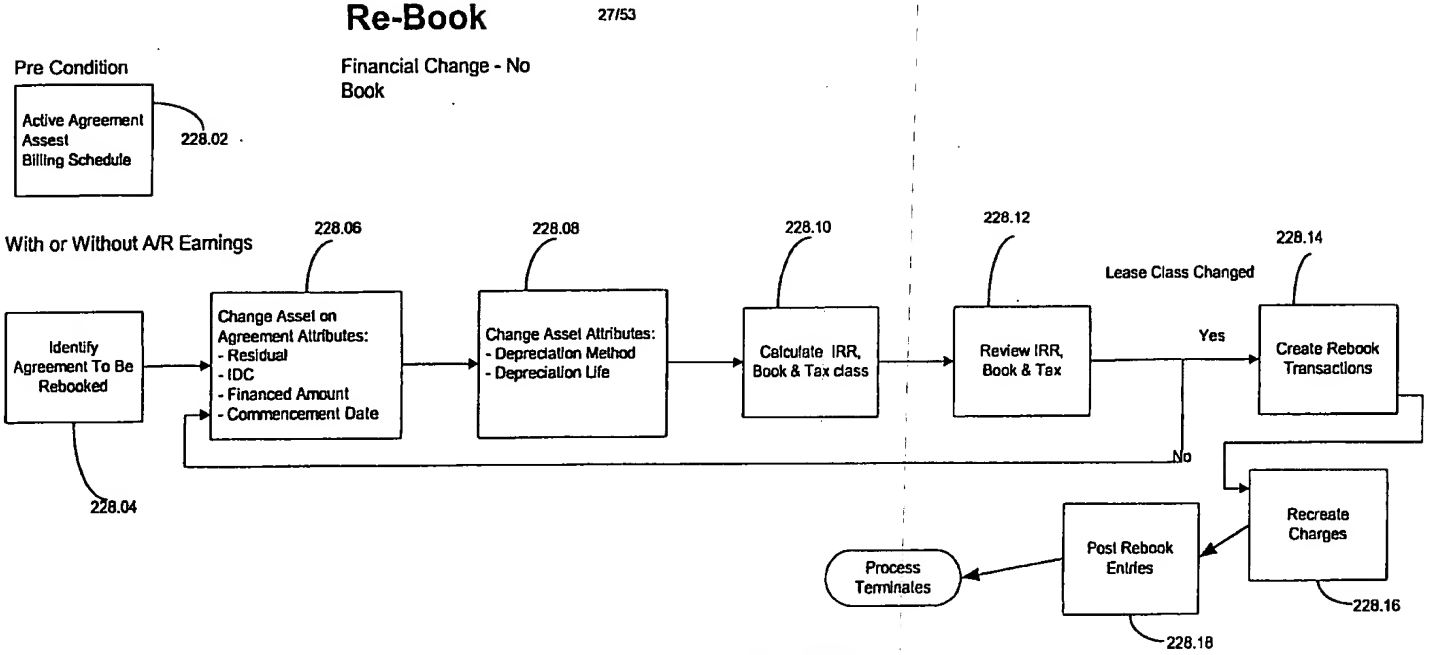

Re-Book
27/53
Pre Condition
Active Agreement
Assest
Billing Schedule
228.02
Financial Change - No Book
With or Without A/R Earnings
228.06
228.08
228.10
228.12
228.14
Lease Class Changed
Identify Agreement To Be Rebooked
Change Asset on Agreement Attributes:
- Residual
- IDC
- Financed Amount
- Commencement Date
Change Asset Attributes:
- Depreciation Method
- Depreciation Life
Calculate IRR, Book & Tax class
Review IRR, Book & Tax
Yes
No
Create Rebook Transactions
228.04
Recreate Charges
Post Rebook Entries
Process Terminates
228.16
228.18

Fig. 7.228a

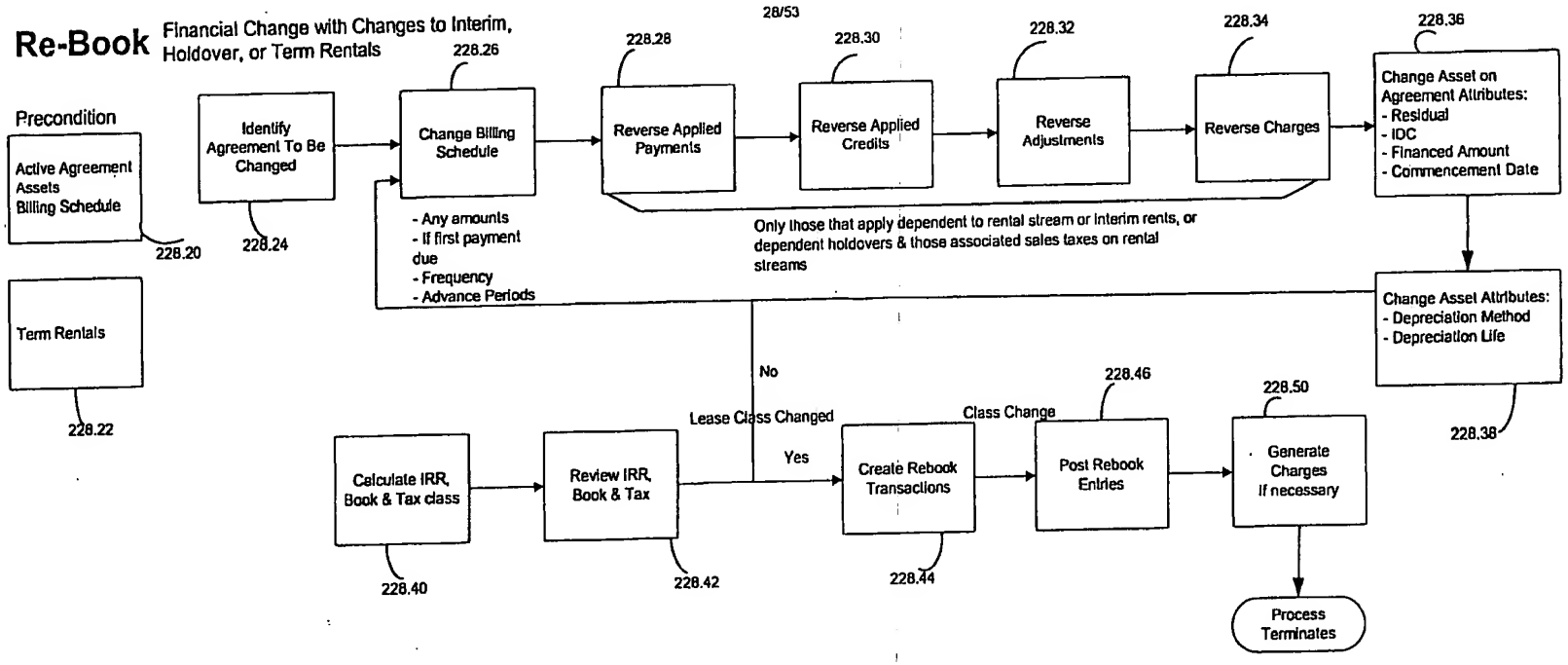

Re-Book
Financial Change with Changes to Interim, Holdover, or Term Rentals
Precondition
Active Agreement Assets Billing Schedule
228.20
Identify Agreement To Be Changed
228.24
228.26
Change Billing Schedule
- Any amounts
- If first payment due
- Frequency
- Advance Periods
228.28
Reverse Applied Payments
228.30
Reverse Applied Credits
228.32
Reverse Adjustments
228.34
Reverse Charges
Only those that apply dependent to rental stream or interim rents, or dependent holdovers & those associated sales taxes on rental streams
228.36
Change Asset on Agreement Attributes:
- Residual
- IDC
- Financed Amount
- Commencement Date
Change Asset Attributes:
- Depreciation Method
- Depreciation Life
228.38
Term Rentals
228.22
No
Lease Class Changed
Yes
Calculate IRR, Book & Tax class
228.40
Review IRR, Book & Tax
228.42
Create Rebook Transactions
228.44
Class Change
228.46
Post Rebook Entries
228.50
Generate Charges If necessary
Process Terminates

Fig. 7.228b

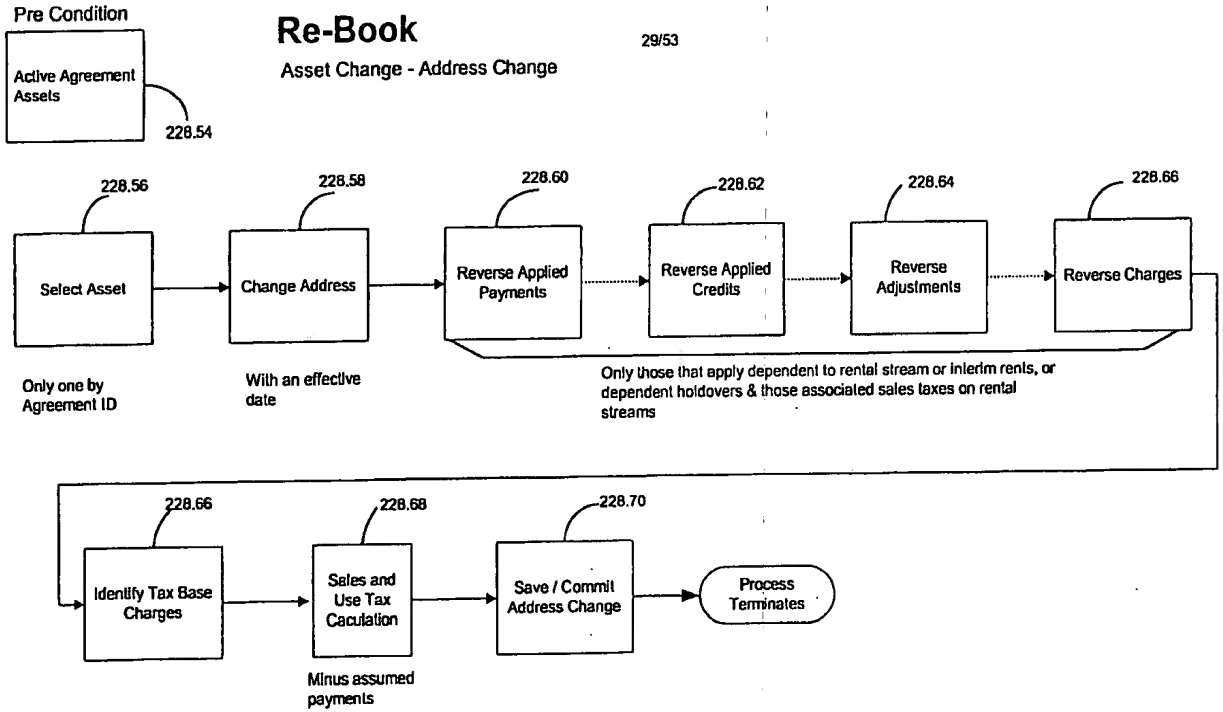

Pre Condition
Active Agreement Assets
228.54
Re-Book
29/53
Asset Change - Address Change
228.56
Select Asset
228.58
Change Address
228.60
Reverse Applied Payments
228.62
Reverse Applied Credits
228.64
Reverse Adjustments
228.66
Reverse Charges
Only one by Agreement ID
With an effective date
Only those that apply dependent to rental stream or interim rents, or dependent holdovers & those associated sales taxes on rental streams
228.66
Identify Tax Base Charges
228.68
Sales and Use Tax Caculation
228.70
Save / Commit Address Change
Process Terminates
Minus assumed payments

Fig. 7.228c

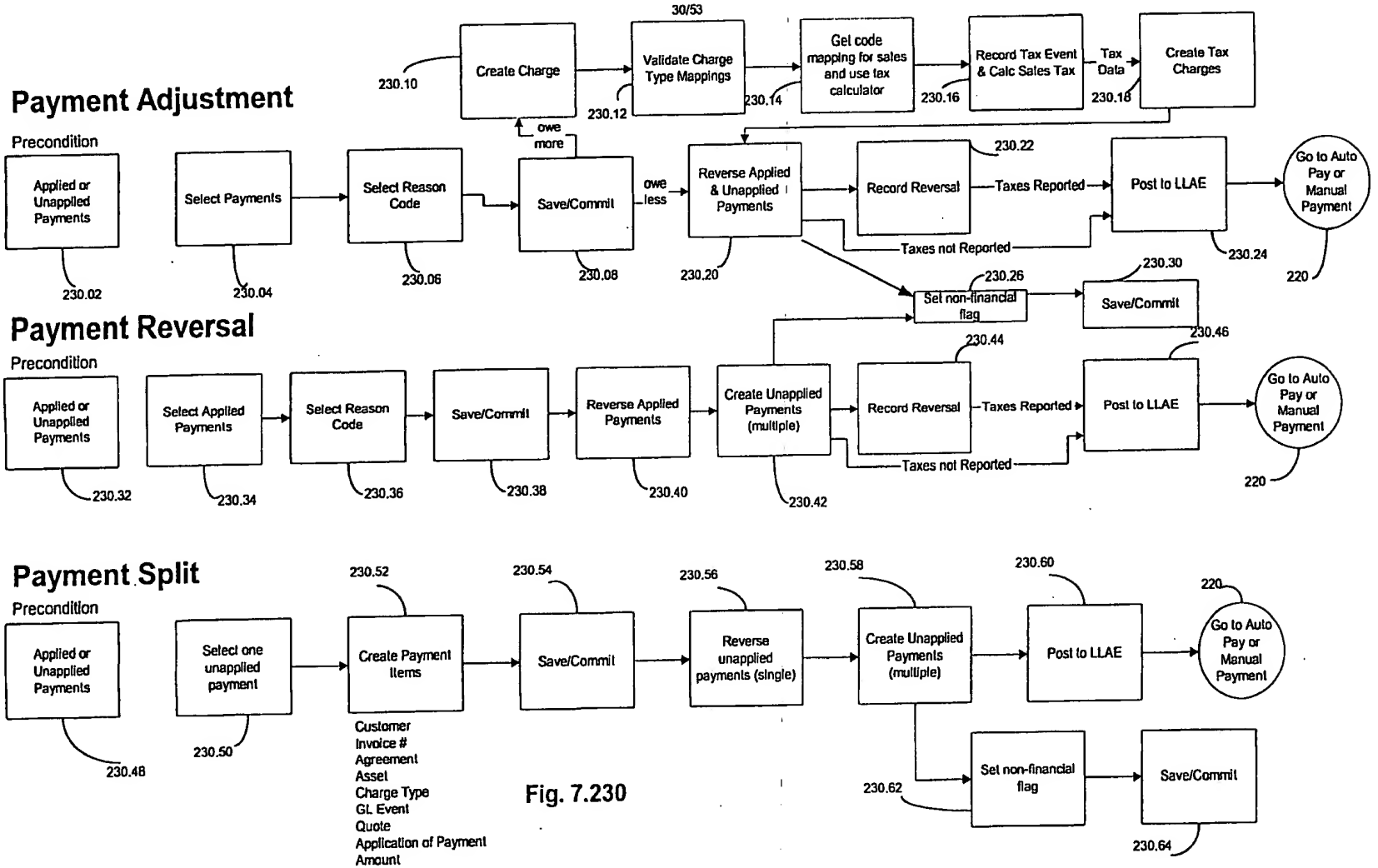

30/53
Payment Adjustment
Precondition
Applied or Unapplied Payments
230.02
Select Payments
230.04
Select Reason Code
230.06
Save/Commit
230.08
owe more
owe less
230.10
Create Charge
230.12
Validate Charge Type Mappings
230.14
Get code mapping for sales and use tax calculator
230.16
Record Tax Event & Calc Sales Tax
Tax Data
230.18
Create Tax Charges
Reverse Applied & Unapplied Payments
230.20
Record Reversal
230.22
Taxes Reported
Taxes not Reported
Post to LLAE
230.24
Go to Auto Pay or Manual Payment
220
Payment Reversal
Precondition
Applied or Unapplied Payments
230.32
Select Applied Payments
230.34
Select Reason Code
230.36
Save/Commit
230.38
Reverse Applied Payments
230.40
Create Unapplied Payments (multiple)
230.42
Set non-financial flag
230.26
Save/Commit
230.30
Record Reversal
230.44
Taxes Reported
Taxes not Reported
Post to LLAE
230.46
Go to Auto Pay or Manual Payment
220
Payment Split
Precondition
Applied or Unapplied Payments
230.48
Select one unapplied payment
230.50
Create Payment Items
230.52
Customer
Invoice #
Agreement
Asset
Charge Type
GL Event
Quote
Application of Payment
Amount
Save/Commit
230.54
Reverse unapplied payments (single)
230.56
Create Unapplied Payments (multiple)
230.58
Post to LLAE
230.60
Go to Auto Pay or Manual Payment
220
Set non-financial flag
230.62
Save/Commit
230.64

Fig. 7.230

T06290 E9296860

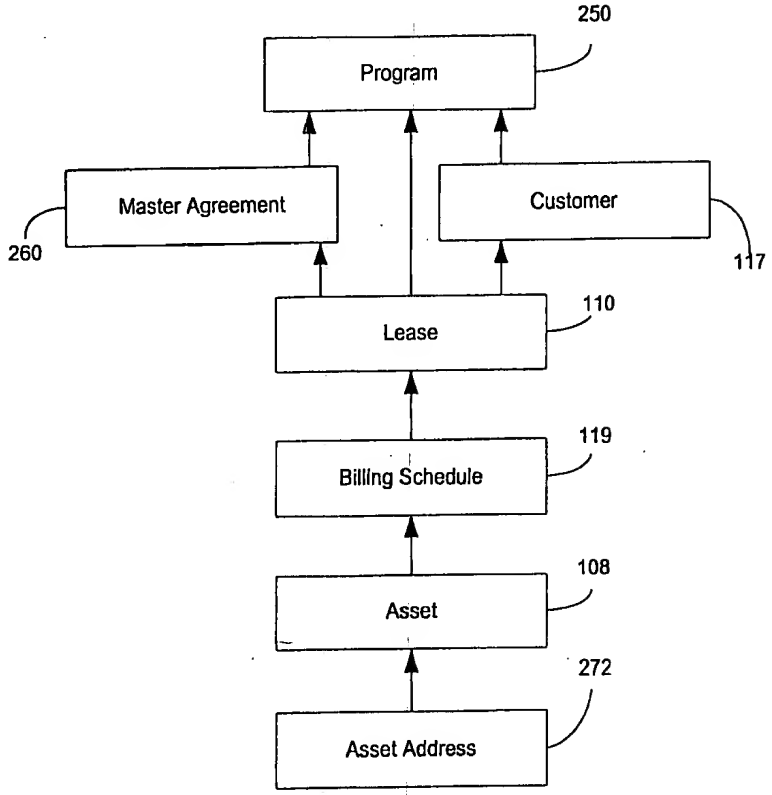
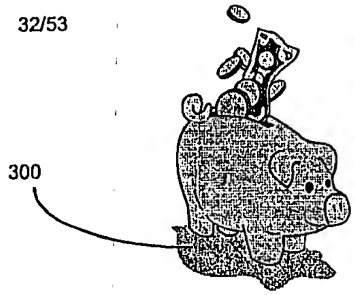


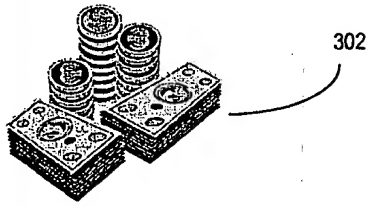
Fig. 8



Revenue

Most Revenue Figures Are Generated at the Lease Level:

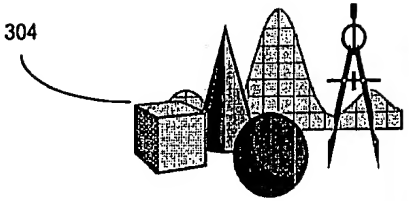
- Billing Schedule - Original Term(s)
- Manual Charges
- Fees
- Holdovers
- Renewals
- Termination Proceeds
- Disposition Proceeds Are Tracked at the Asset Level



PassThru Charges

Passthru Charges Are Tracked at Either the Asset or the Lease Level:

- Maintenance Billings
- Sales/use Tax on Billings
- Insurance
- Property Tax
- Purchase Tax
- Sales/use Tax on Disposition



Asset Management

Inventory Tracking Information Is Managed at the Asset Level:

- On Lease
- Off Lease
- Physical Location
- Splits (If Applicable)
- Return Authorization(s)
- Return Tracking
- Grouping and Linking

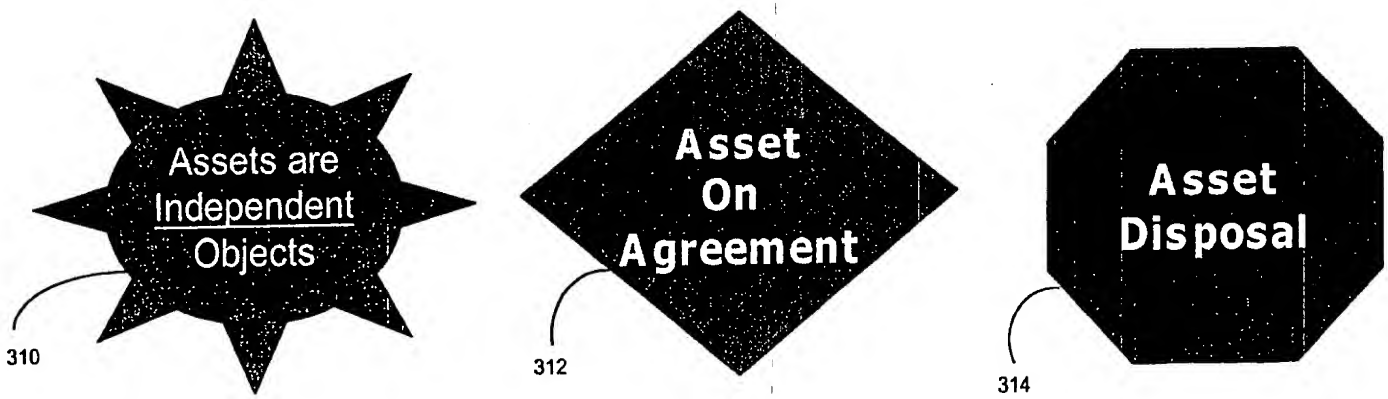
Expenses

Expense Figures Are Generated at Either the Asset or the Lease Level:

- Initial Direct Costs
- Commissions
- Depreciation of Capitalized Costs
- Expensed Cost Factors

Fig. 9

Asset Based Functionality
Creation Through Disposition



An asset is endowed with certain inalienable qualities by its creator.

Each asset has a unique identity, a location, and the ability to generate revenue, incur costs, and serve as a conduit for funds.

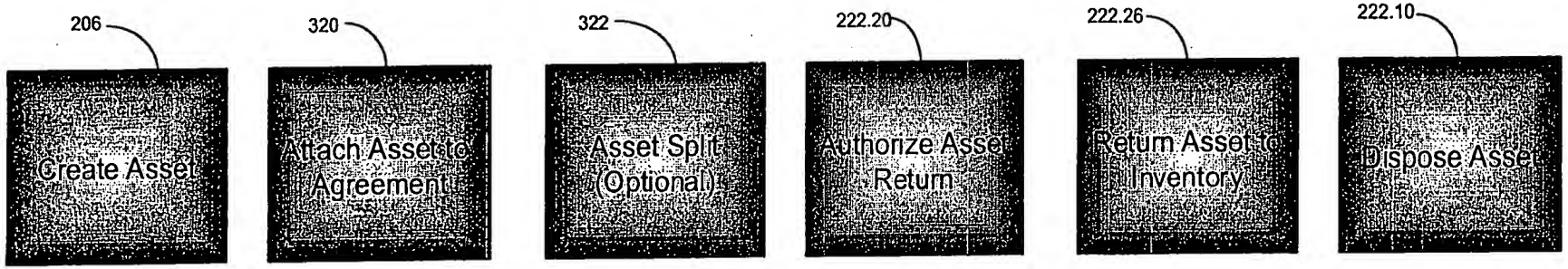
Generally an asset is attached to one or more lease agreements for as much of its useful life as possible.

Throughout the portion of its life spent on lease, however, the asset retains its full complement of inalienable qualities.

At its disposition, an asset can calculate its overall return, regardless of the number of leases it has been attached to or the various configurations in which it has participated.

Fig. 10

Asset Lifecycle Overview



Enter required information, such as Manufacturer, Equipment Type, Model, etc.

Asset may be activated and book and/or tax depreciate in inventory.

Attaching an asset to an agreement removes it from available inventory and assigns lease-specific values such as tax status, IDC and booked residual value.

Splitting an asset recreates all financial attributes and permits the addition of new assets to an existing agreement.

Authorizing the return of an asset assigns it a return authorization number, pending return date and a pending status.

Returning an asset to inventory assigns it a date of return and status making it available for disposal or re-lease.

Disposing of an asset requires the entry of a disposition reason code and includes sales tax and proceeds information if applicable.

Fig. 11

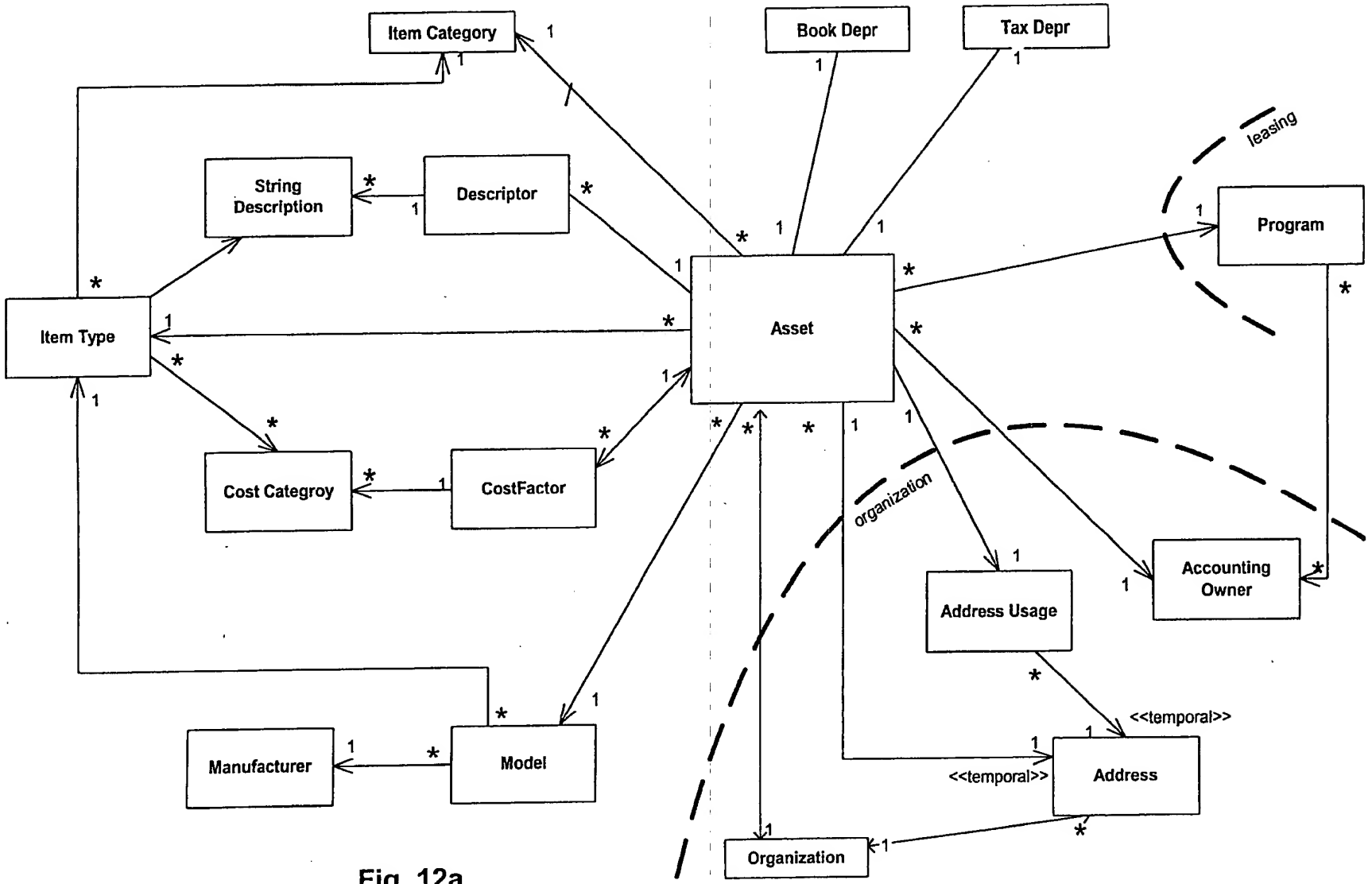

Item Category
Book Depr
Tax Depr
leasing
String Description
Descriptor
Program
Item Type
Asset
Cost Categroy
CostFactor
organization
Accounting Owner
Address Usage
<<temporal>>
Manufacturer
Model
<<temporal>>
Address
Organization

Fig. 12a

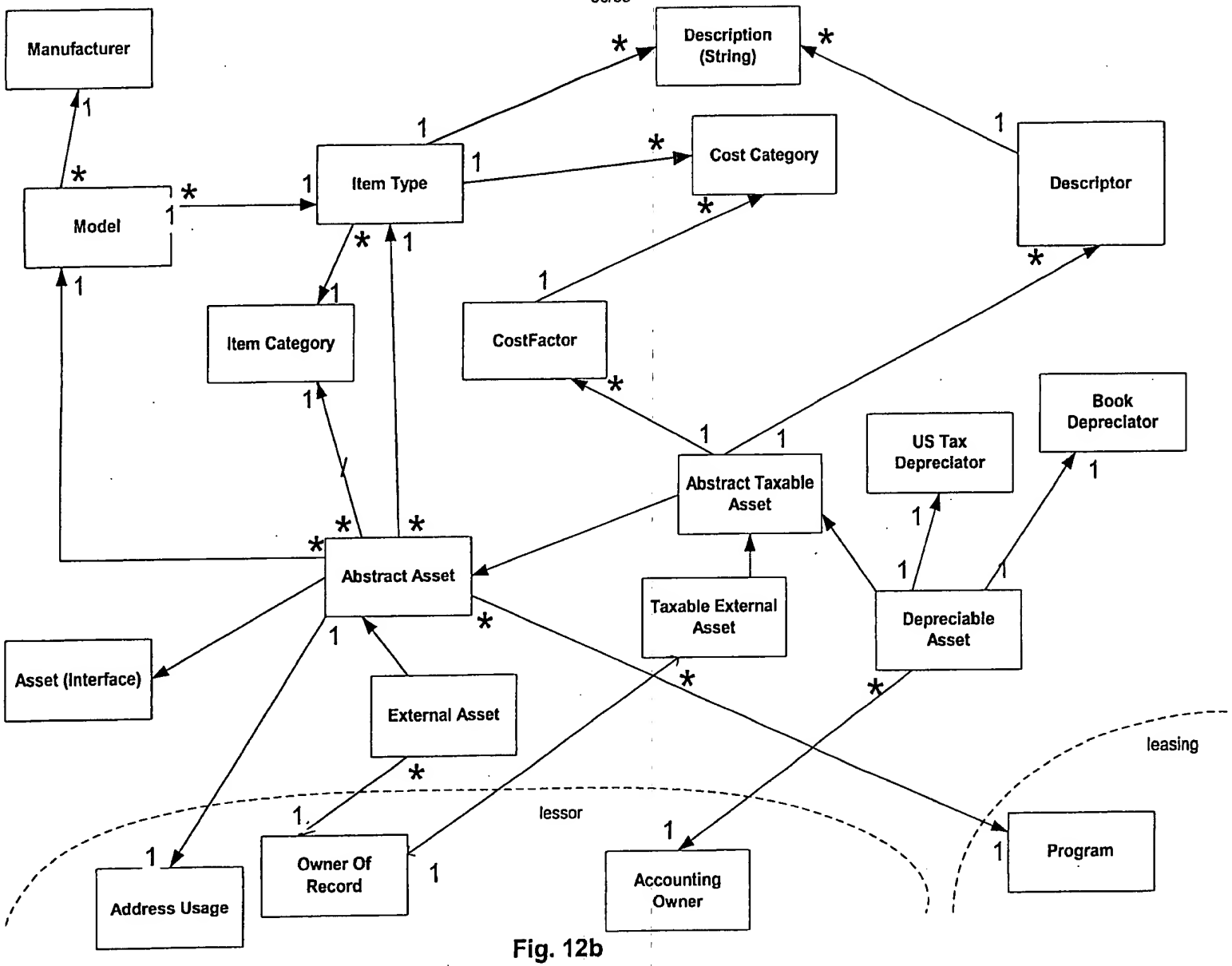

Manufacturer
Description (String)
Model
Item Type
Cost Category
Descriptor
Item Category
CostFactor
Book Depreciator
US Tax Depreciator
Abstract Taxable Asset
Abstract Asset
Taxable External Asset
Depreciable Asset
Asset (Interface)
External Asset
leasing
lessor
Owner Of Record
Address Usage
Accounting Owner
Program

Fig. 12b

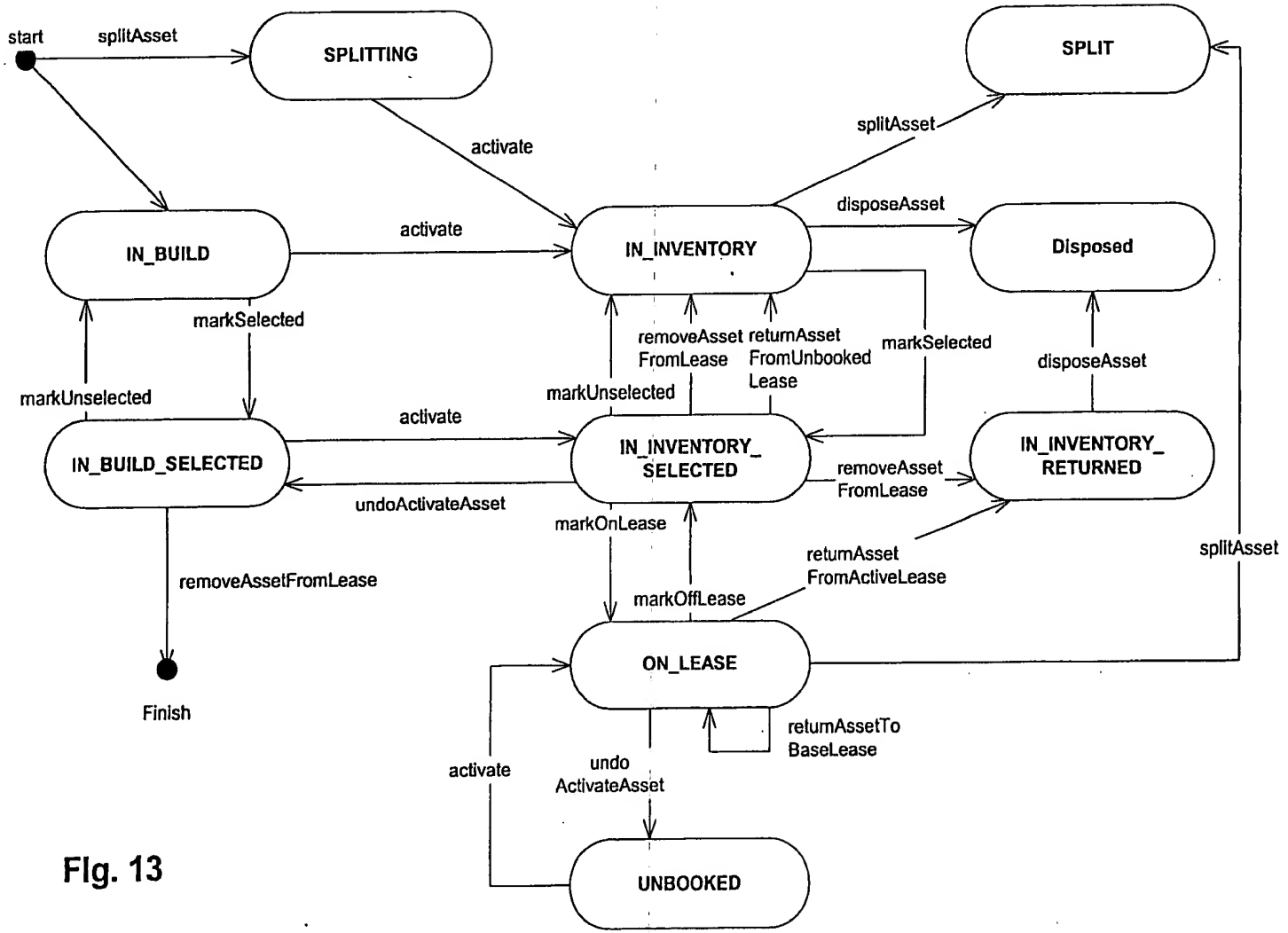

start
splitAsset
SPLITTING
activate
SPLIT
splitAsset
IN_BUILD
activate
IN_INVENTORY
disposeAsset
Disposed
markSelected
removeAsset FromLease
returnAsset FromUnbooked Lease
markSelected
disposeAsset
markUnselected
markUnselected
activate
IN_BUILD_SELECTED
IN_INVENTORY_ SELECTED
removeAsset FromLease
IN_INVENTORY_ RETURNED
undoActivateAsset
markOnLease
returnAsset FromActiveLease
splitAsset
removeAssetFromLease
markOffLease
ON_LEASE
Finish
returnAssetTo BaseLease
activate
undo ActivateAsset
UNBOOKED

Fig. 13

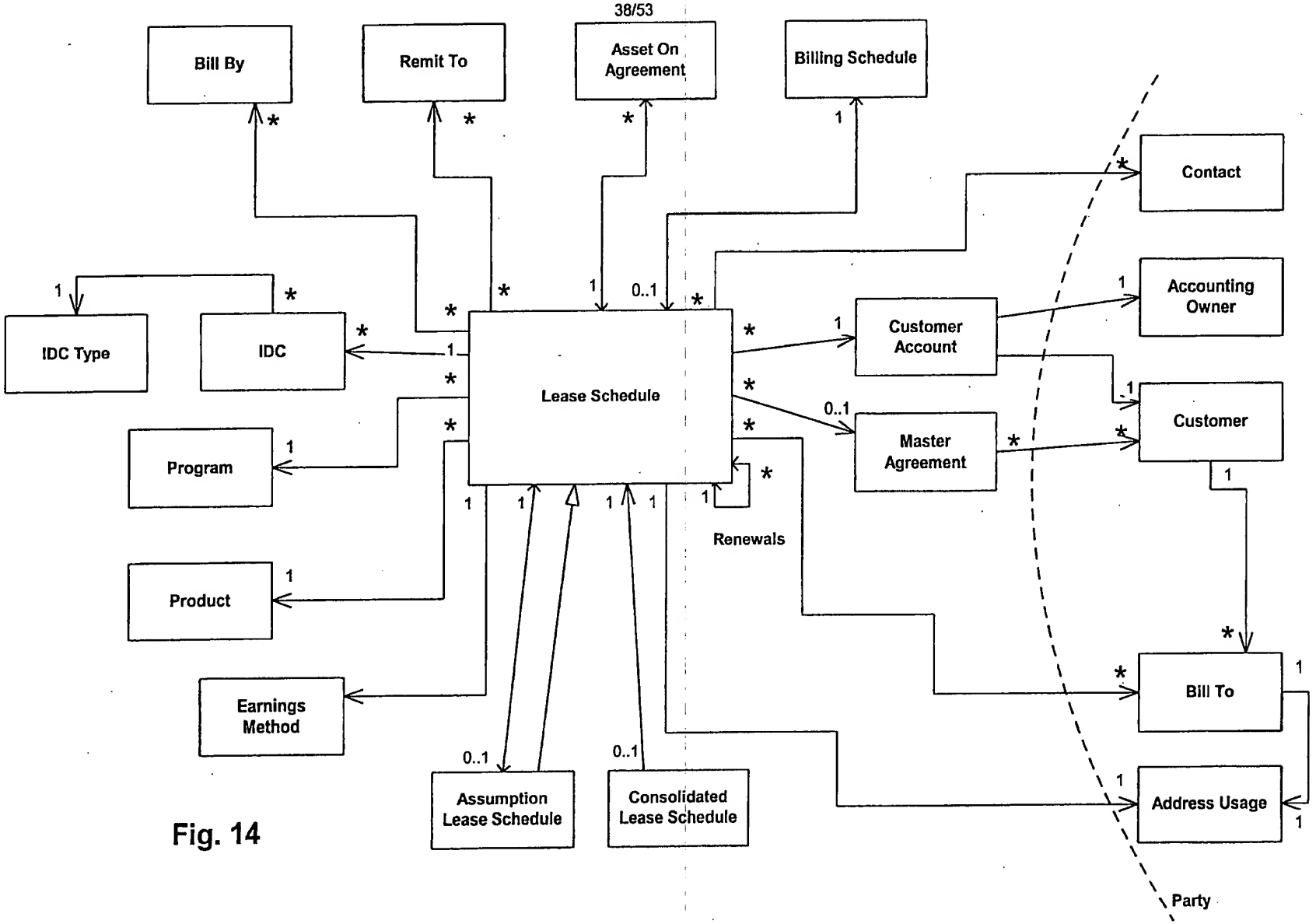

Bill By
Remit To
Asset On Agreement
Billing Schedule
Contact
Accounting Owner
IDC Type
IDC
Lease Schedule
Customer Account
Customer
Program
Master Agreement
Renewals
Product
Earnings Method
Bill To
Assumption Lease Schedule
Consolidated Lease Schedule
Address Usage
Party

Fig. 14

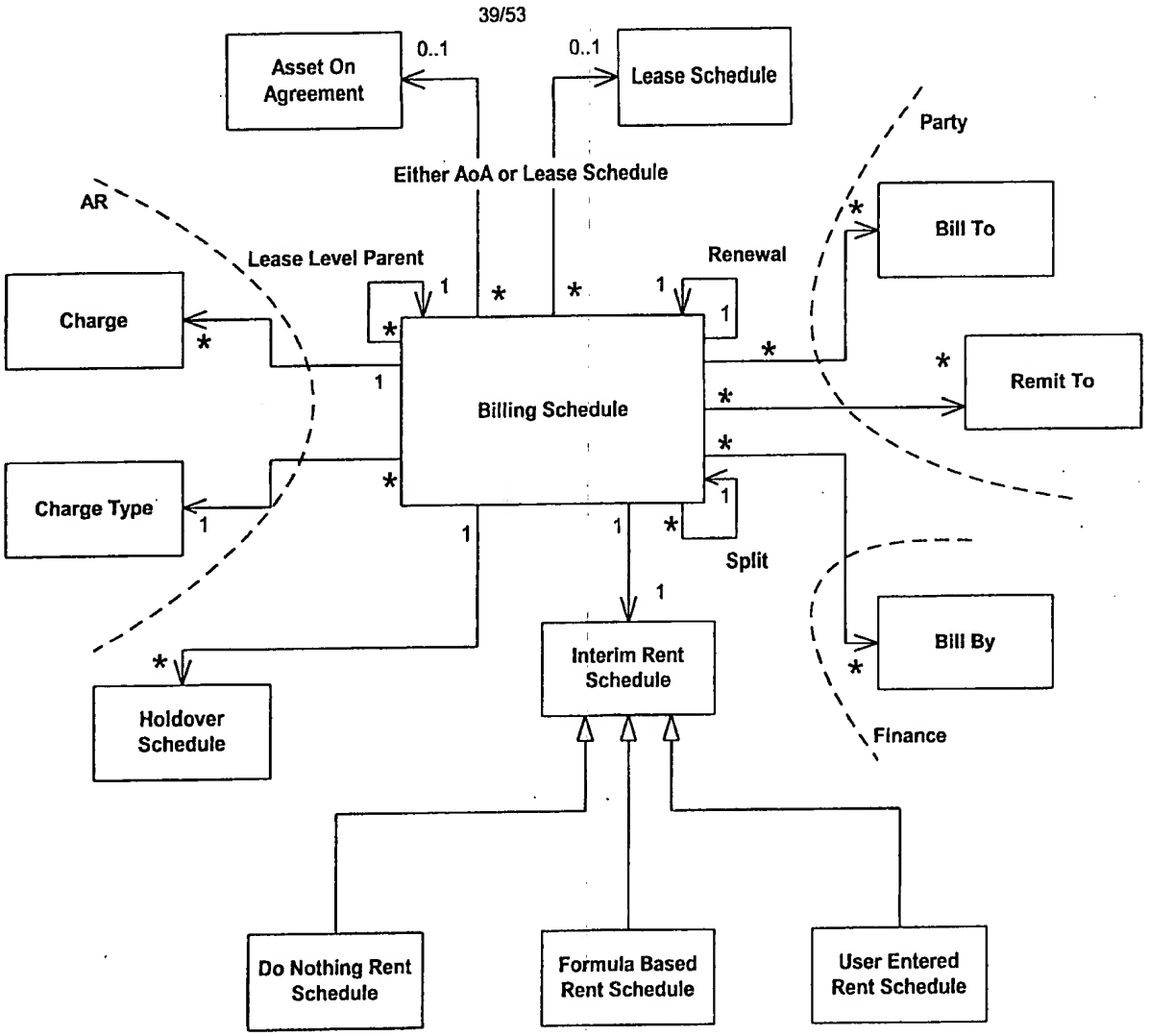

Asset On Agreement
0..1
0..1
Lease Schedule
Either AoA or Lease Schedule
AR
Party
Lease Level Parent
Renewal
Charge
Bill To
Billing Schedule
Remit To
Charge Type
Split
Interim Rent Schedule
Bill By
Holdover Schedule
Finance
Do Nothing Rent Schedule
Formula Based Rent Schedule
User Entered Rent Schedule

Fig. 15a

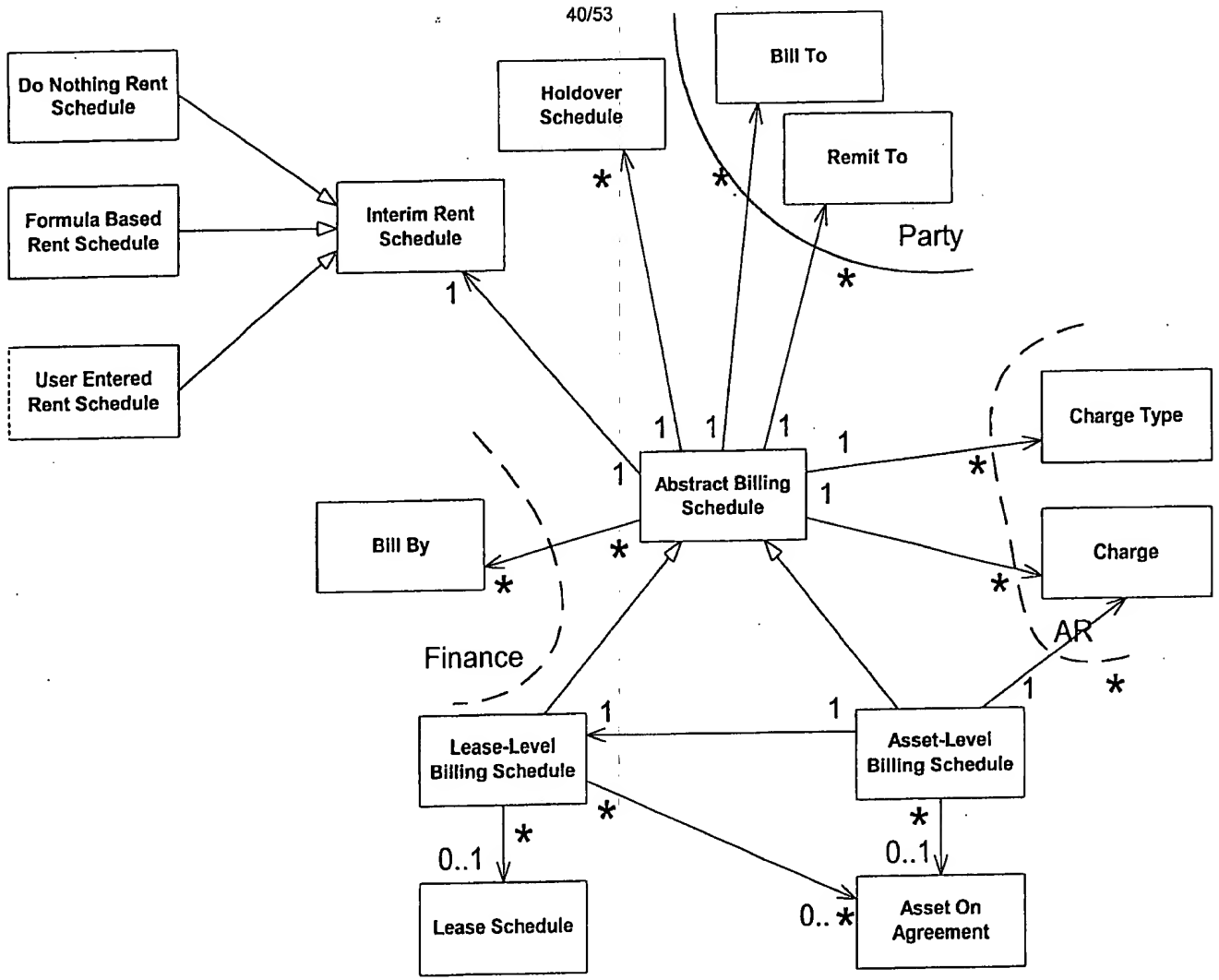

Do Nothing Rent Schedule
Formula Based Rent Schedule
User Entered Rent Schedule
Interim Rent Schedule
Holdover Schedule
Bill To
Remit To
Party
Abstract Billing Schedule
Bill By
Charge Type
Charge
Finance
AR
Lease-Level Billing Schedule
Asset-Level Billing Schedule
Lease Schedule
Asset On Agreement
1
*
0..1
0..*

Fig. 15b

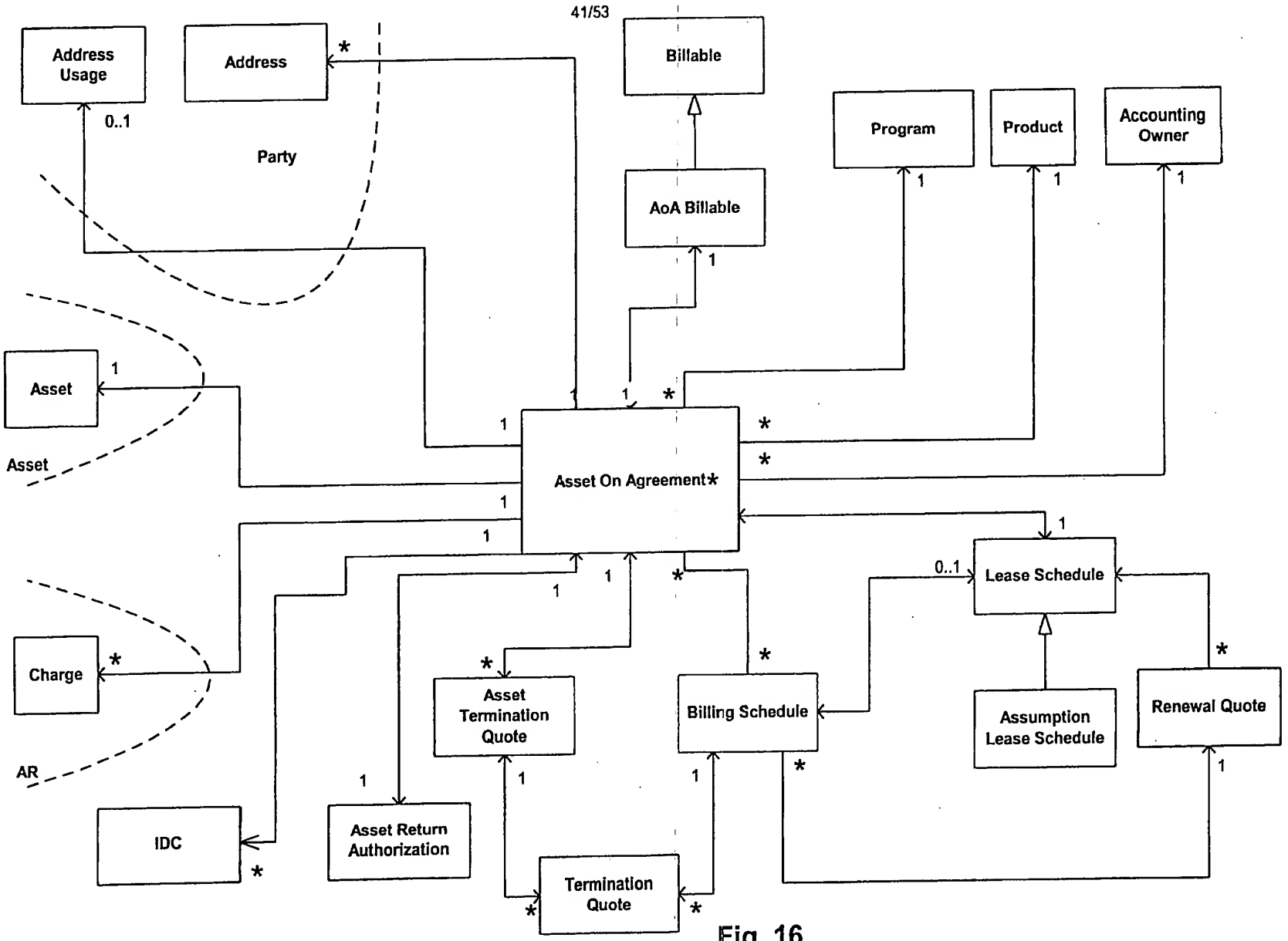

Address Usage
Address
Billable
Party
0..1
AoA Billable
Program
Product
Accounting Owner
Asset
Asset
Asset On Agreement*
Charge
AR
IDC
Asset Return Authorization
Asset Termination Quote
Billing Schedule
Lease Schedule
Assumption Lease Schedule
Renewal Quote
Termination Quote

Fig. 16

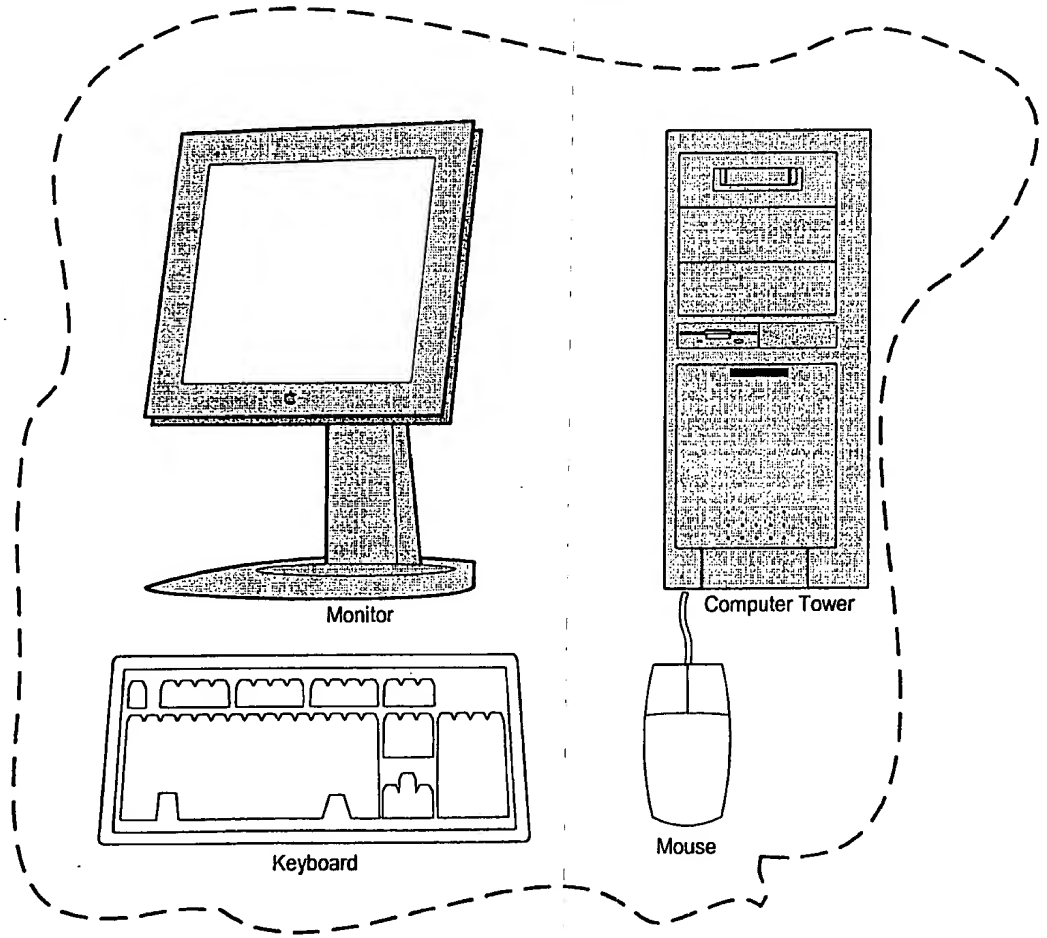


Fig. 17a

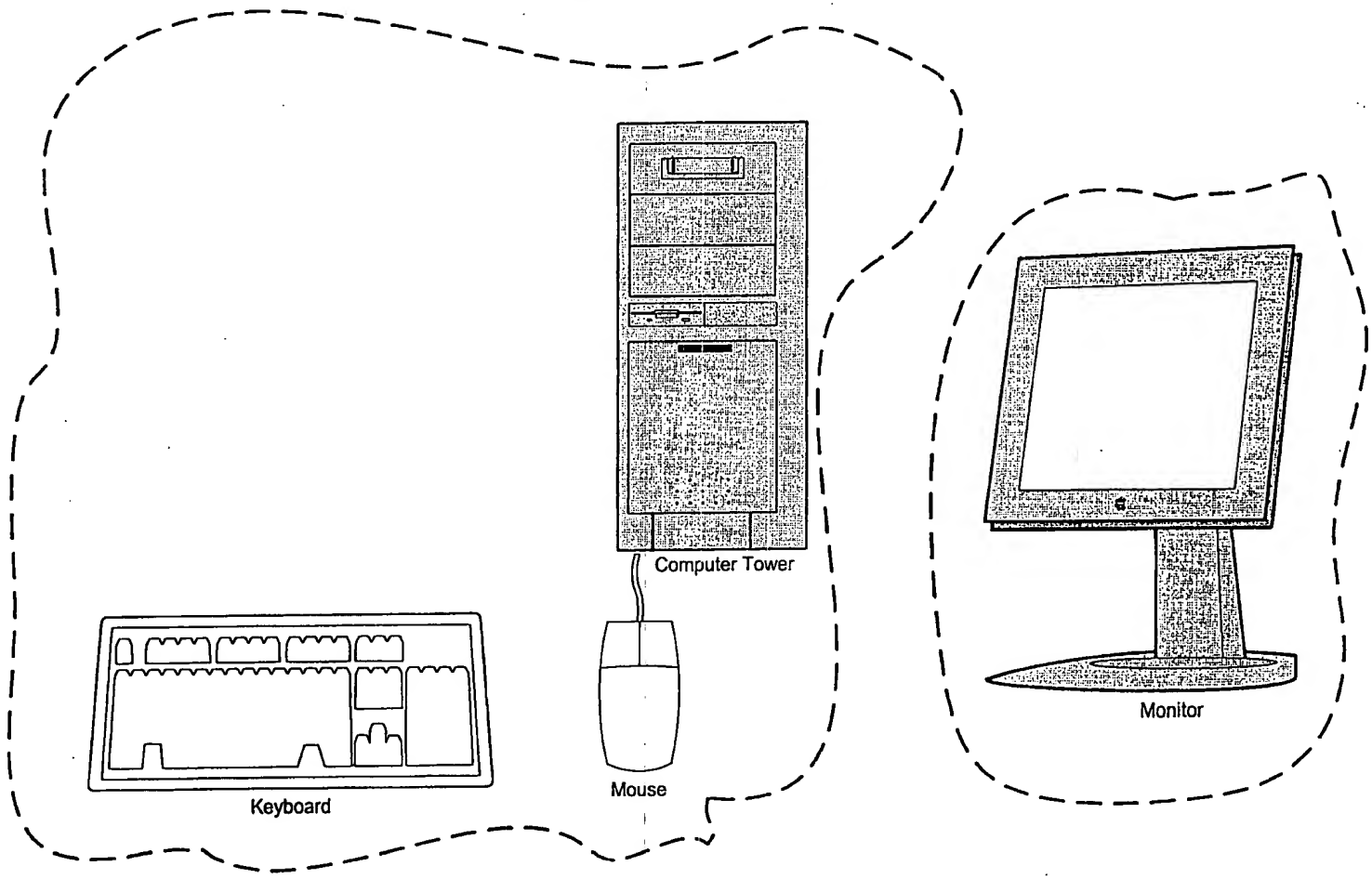


Fig. 17b

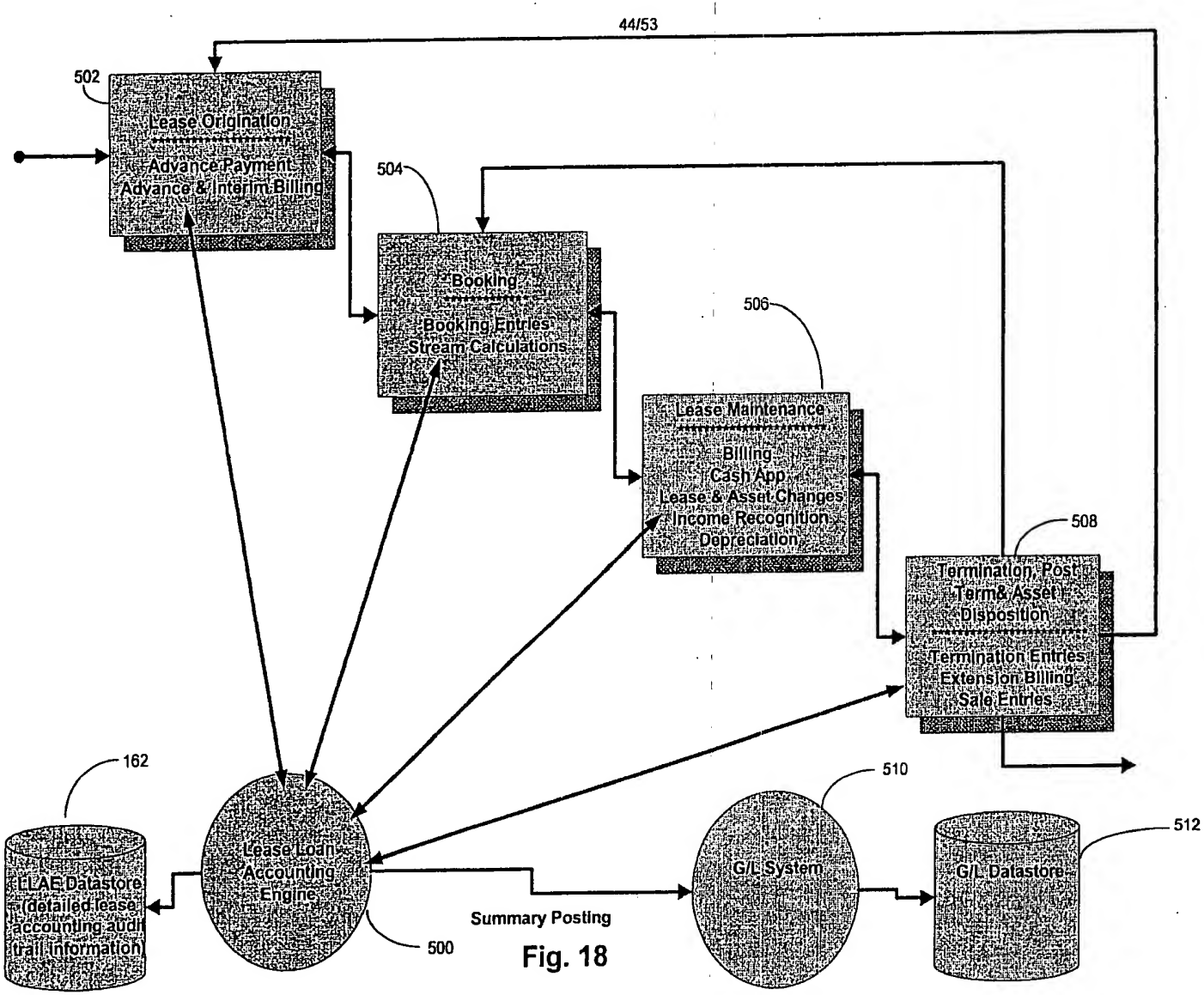
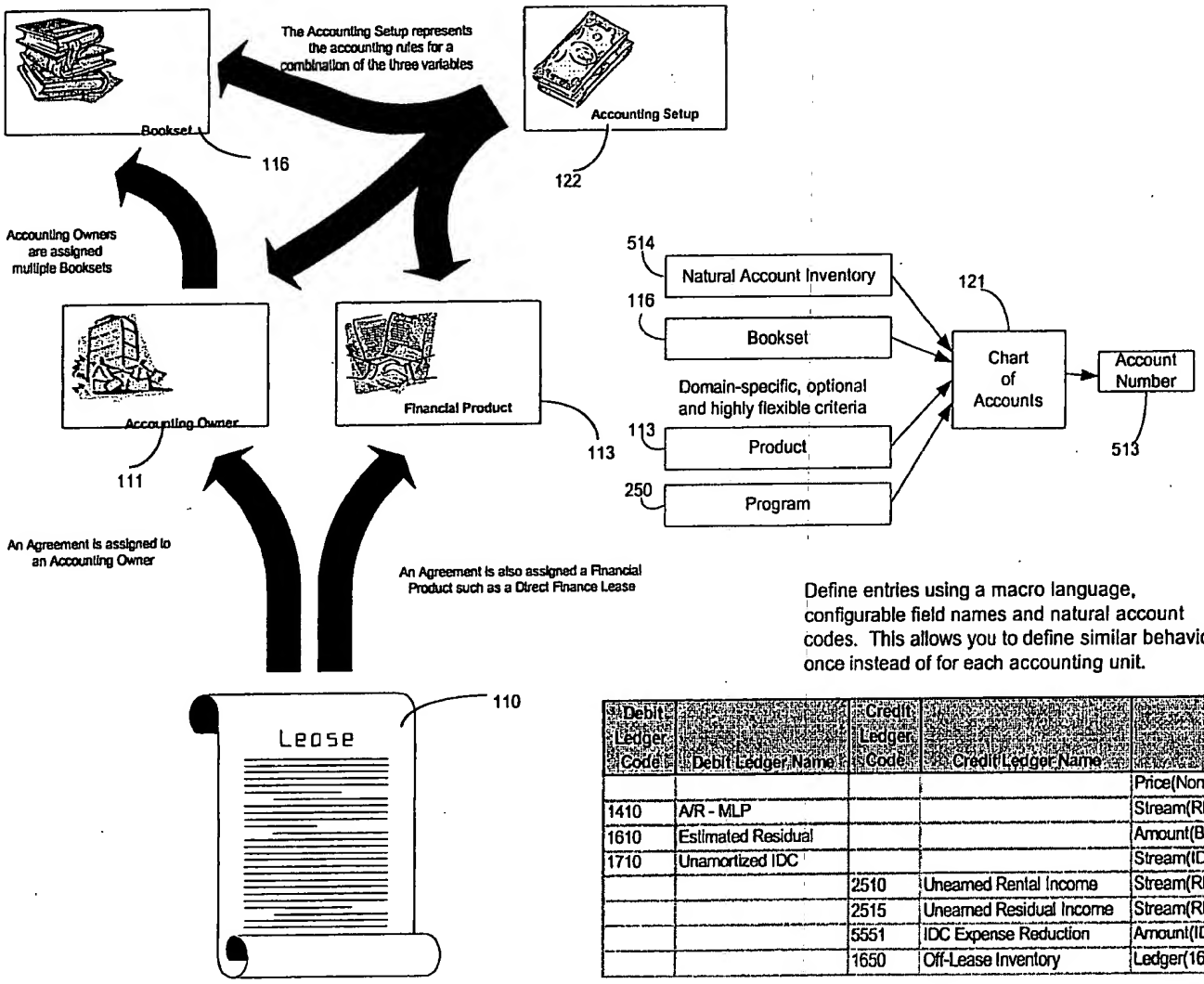

502
Lease Origination
Advance Payment
Advance & Interim Billing
504
Booking
Booking Entries
Stream Calculations
506
Lease Maintenance
Billing
Cash App
Lease & Asset Changes
Income Recognition
Depreciation
508
Termination, Post Term & Asset Disposition
Termination Entries
Extension Billing
Sale Entries
162
LLAE Datastore
(detailed lease accounting audit trail information)
Lease Loan Accounting Engine
500
Summary Posting
510
G/L System
512
G/L Datastore

Fig. 18



Define entries using a macro language, configurable field names and natural account codes. This allows you to define similar behaviors once instead of for each accounting unit.

Debit Ledger Code	Debit Ledger Name	Credit Ledger Code	Credit Ledger Name	Macro
				Price(NonAmount(INCOME_METHOD))
1410	A/R - MLP			Stream(RENT)
1610	Estimated Residual			Amount(BOOK_RESIDUAL)
1710	Unamortized IDC			Stream(IDC_AMORT)
		2510	Unearned Rental Income	Stream(RENTAL_INC)
		2515	Unearned Residual Income	Stream(RESID_INC)
		5551	IDC Expense Reduction	Amount(IDC)
		1650	Off-Lease Inventory	Ledger(1650)

Fig. 19

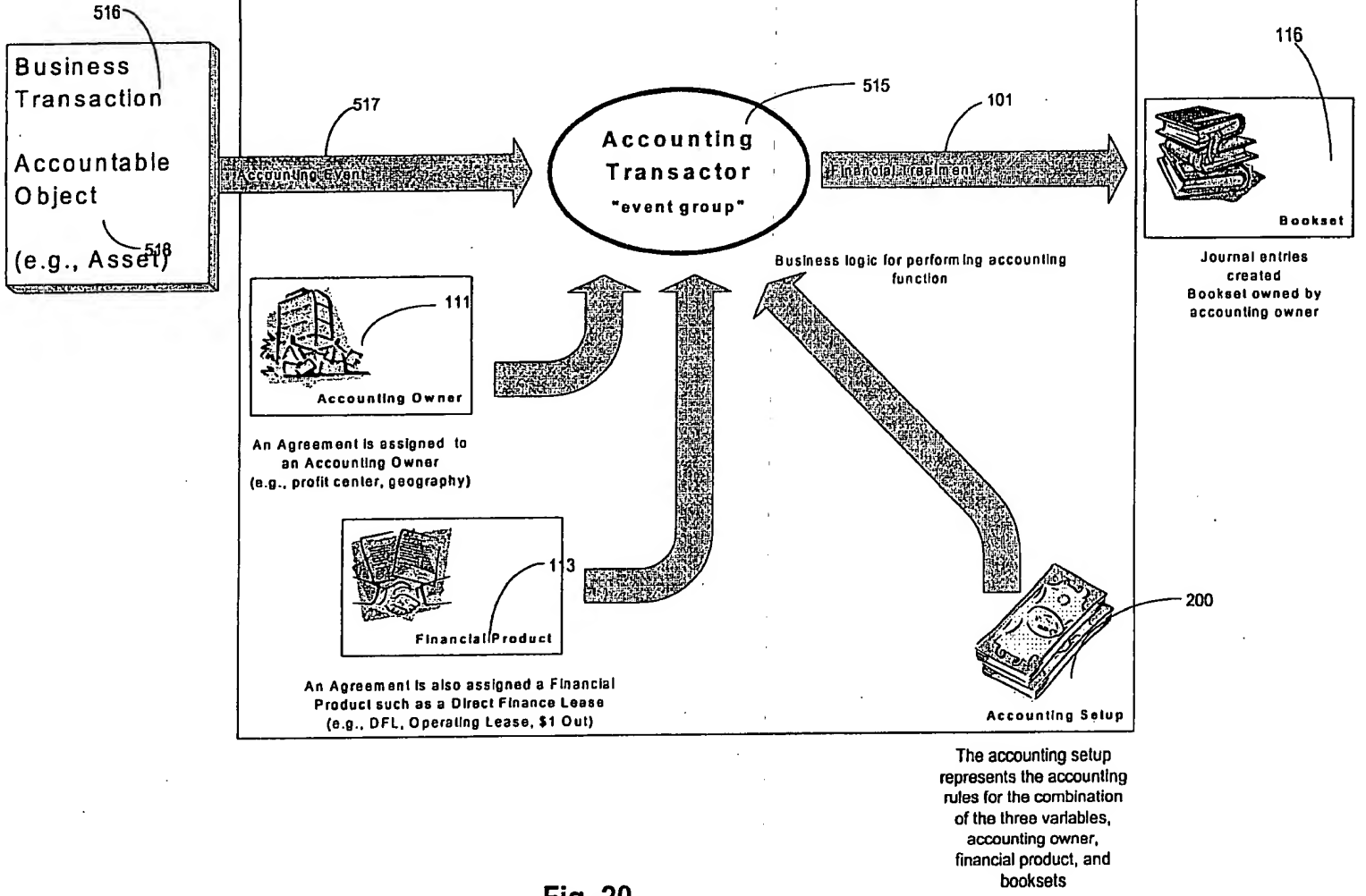

516
Business Transaction
Accountable Object
(e.g., Asset)
518
517
Accounting Event
Accounting Transactor
"event group"
515
101
Financial Treatment
116
Bookset
Journal entries created Bookset owned by accounting owner
Business logic for performing accounting function
111
Accounting Owner
An Agreement is assigned to an Accounting Owner (e.g., profit center, geography)
113
Financial Product
An Agreement is also assigned a Financial Product such as a Direct Finance Lease (e.g., DFL, Operating Lease, $1 Out)
200
Accounting Setup
The accounting setup represents the accounting rules for the combination of the three variables, accounting owner, financial product, and booksets

Fig. 20

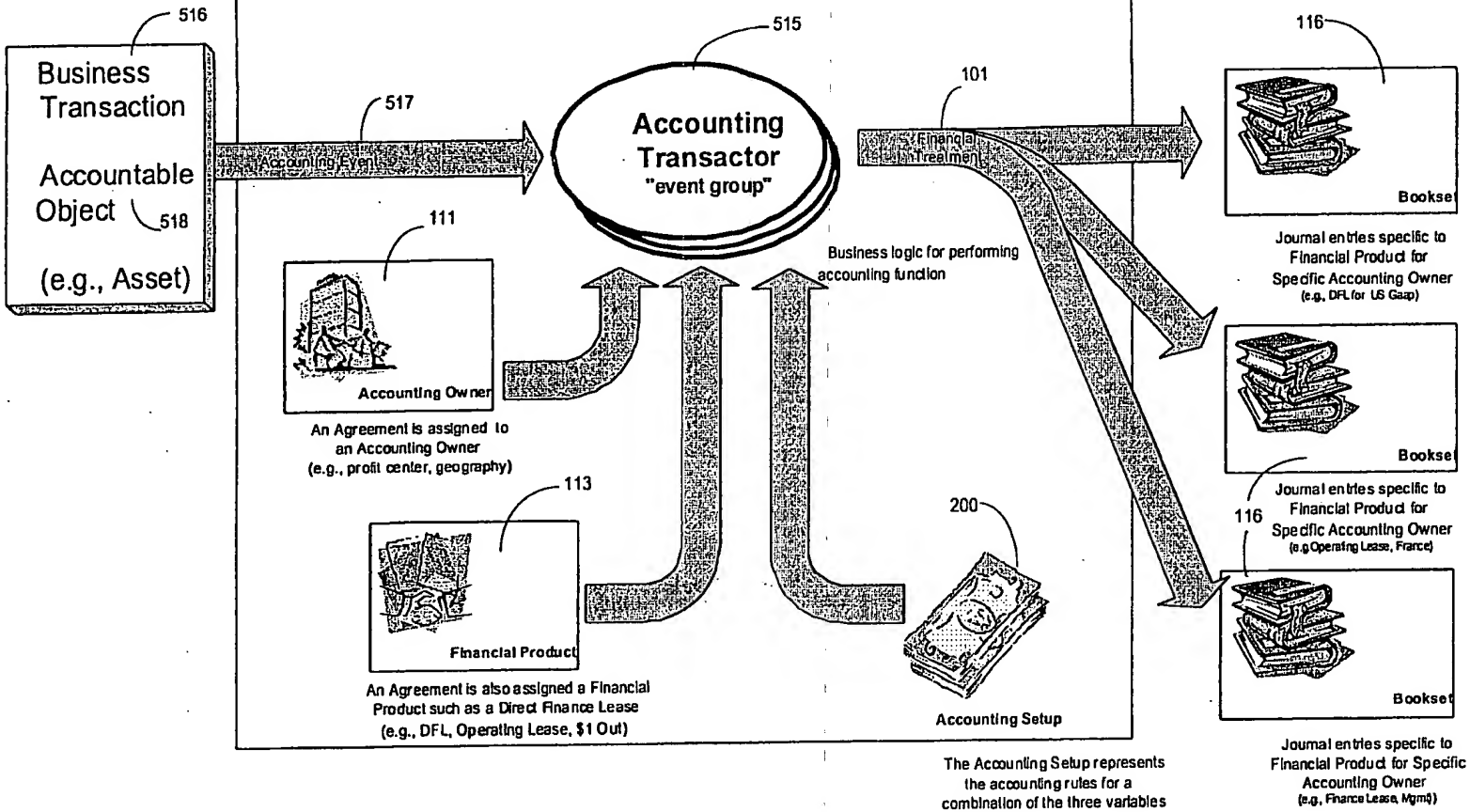

516
Business Transaction
Accountable Object
518
(e.g., Asset)
517
Accounting Event
515
Accounting Transactor
"event group"
101
Financial Treatment
111
Accounting Owner
An Agreement is assigned to an Accounting Owner (e.g., profit center, geography)
113
Financial Product
An Agreement is also assigned a Financial Product such as a Direct Finance Lease (e.g., DFL, Operating Lease, $1 Out)
Business logic for performing accounting function
200
Accounting Setup
The Accounting Setup represents the accounting rules for a combination of the three variables
116
Bookset
Journal entries specific to Financial Product for Specific Accounting Owner (e.g., DFL for US Gaap)
Bookset
Journal entries specific to Financial Product for Specific Accounting Owner (e.g Operating Lease, France)
116
Bookset
Journal entries specific to Financial Product for Specific Accounting Owner (e.g., Finance Lease, Mgmt)

Fig. 21

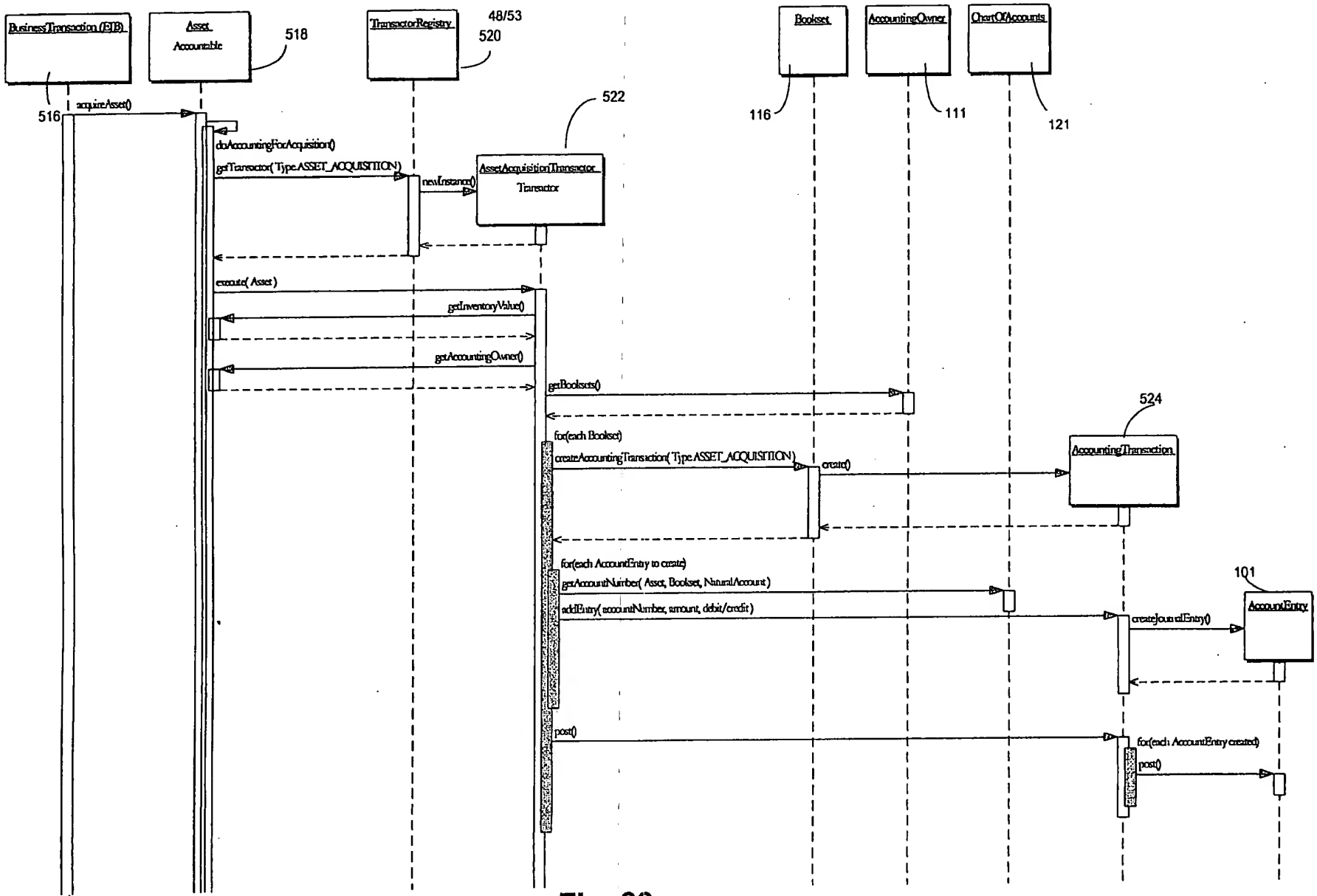

BusinessTransaction (EJB)
Asset
Accountable
518
TransactorRegistry
48/53
520
Bookset
AccountingOwner
ChartOfAccounts
522
516
116
111
121
acquireAsset()
doAccountingForAcquisition()
getTransactor(Type.ASSET_ACQUISITION)
newInstance()
AssetAcquisitionTransactor
Transactor
execute(Asset)
getInventoryValue()
getAccountingOwner()
getBooksets()
524
for(each Bookset)
createAccountingTransaction(Type.ASSET_ACQUISITION)
create()
AccountingTransaction
for(each AccountEntry to create)
getAccountNumber(Asset, Bookset, NaturalAccount)
addEntry(accountNumber, amount, debit/credit)
createJournalEntry()
101
AccountEntry
post()
for(each AccountEntry created)
post()

Fig. 22

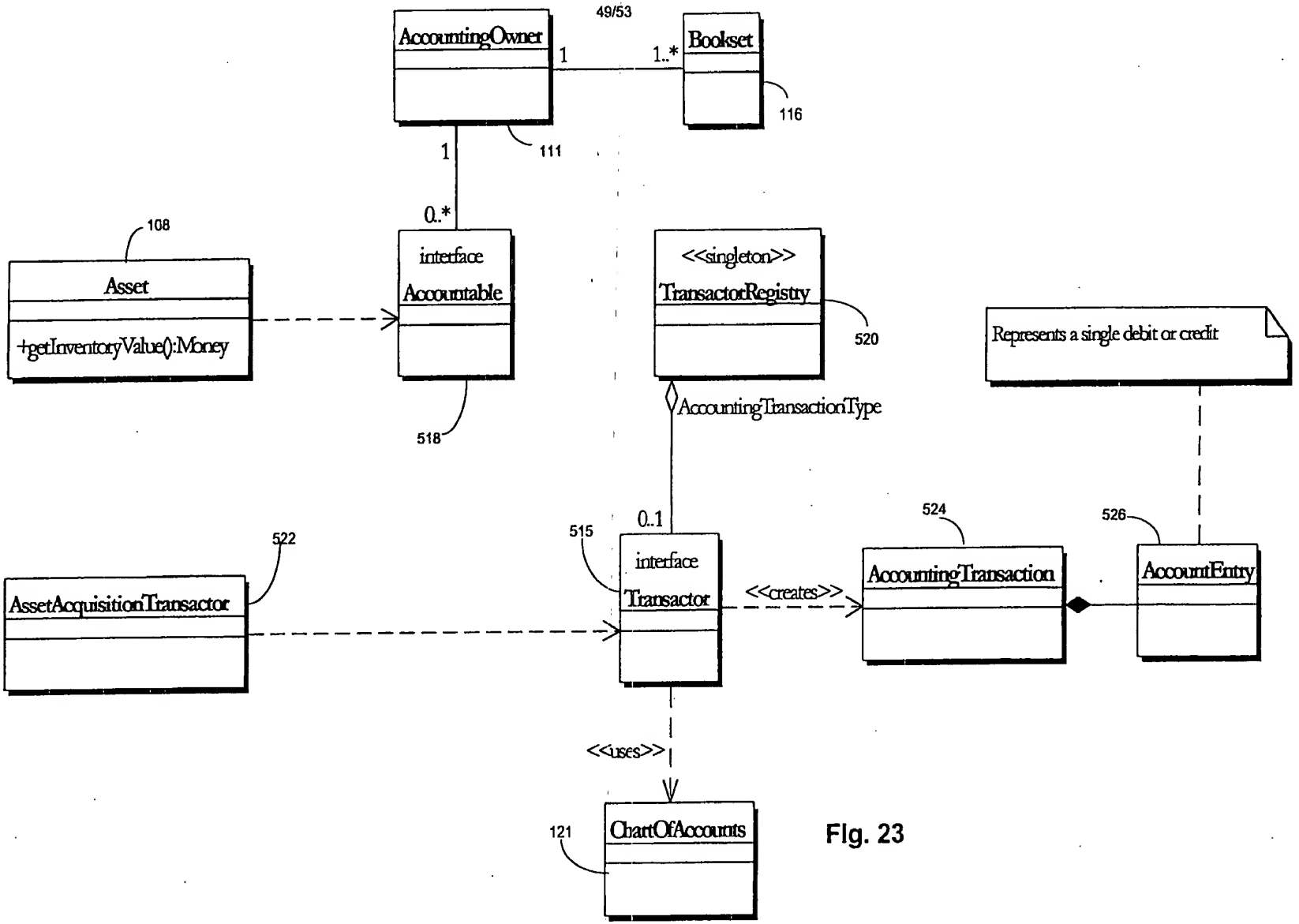

AccountingOwner
1
1..*
Bookset
116
111
1
0.*
108
Asset
+getInventoryValue():Money
interface
Accountable
518
<<singleton>>
TransactorRegistry
520
AccountingTransactionType
Represents a single debit or credit
0..1
515
522
AssetAcquisitionTransactor
interface
Transactor
<<creates>>
524
AccountingTransaction
526
AccountEntry
<<uses>>
121
ChartOfAccounts

Fig. 23

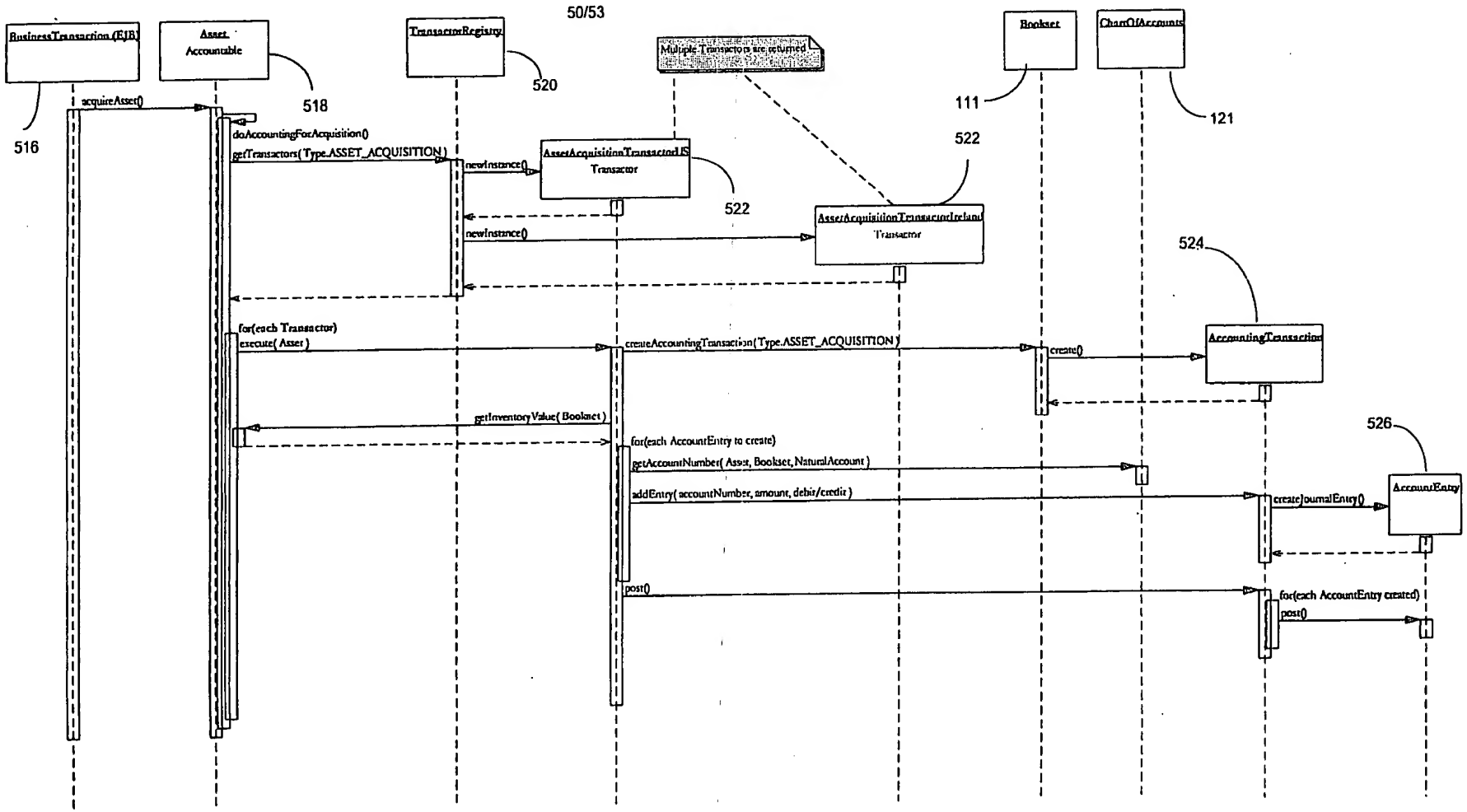

BusinessTransaction (EJB)
Asset Accountable
TransactorRegistry
Multiple Transactors are returned
Bookset
ChartOfAccounts
516
518
520
111
121
522
524
526
acquireAsset()
doAccountingForAcquisition()
getTransactors(Type.ASSET_ACQUISITION)
newInstance()
AssetAcquisitionTransactorIS Transactor
AssetAcquisitionTransactorIreland Transactor
for(each Transactor)
execute(Asset)
createAccountingTransaction(Type.ASSET_ACQUISITION)
create()
AccountingTransaction
getInventoryValue(Bookset)
for(each AccountEntry to create)
getAccountNumber(Asset, Bookset, NaturalAccount)
addEntry(accountNumber, amount, debit/credit)
createJournalEntry()
AccountEntry
post()
for(each AccountEntry created)
post()

Fig. 24

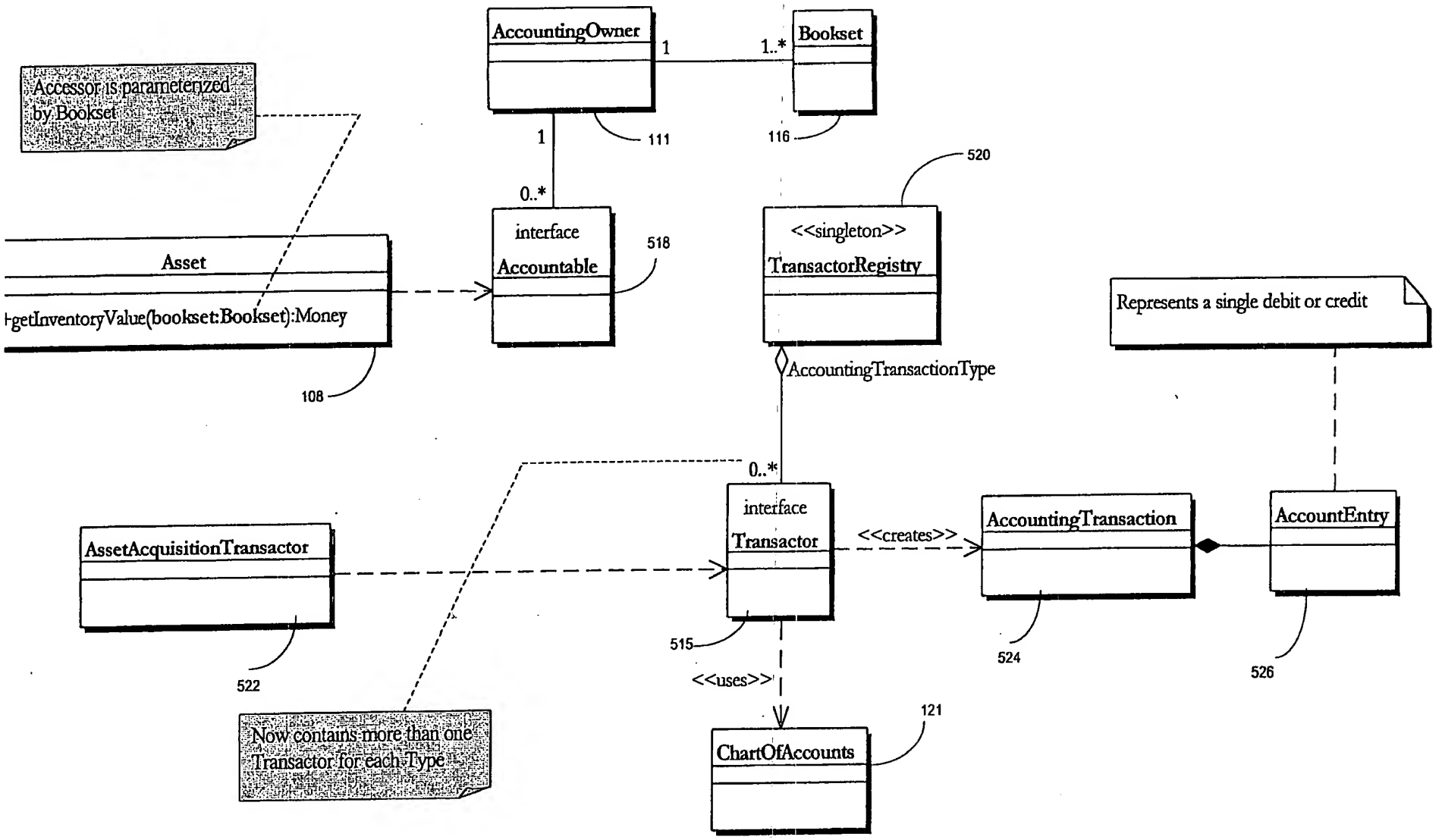

AccountingOwner
1
1..*
Bookset
Accessor is parameterized by Bookset
1
111
116
0..*
520
interface
Accountable
518
<<singleton>>
TransactorRegistry
Represents a single debit or credit
Asset
+getInventoryValue(bookset:Bookset):Money
108
AccountingTransactionType
0..*
interface
Transactor
<<creates>>
AccountingTransaction
AccountEntry
AssetAcquisitionTransactor
515
524
526
522
<<uses>>
Now contains more than one Transactor for each Type
121
ChartOfAccounts

Fig. 25

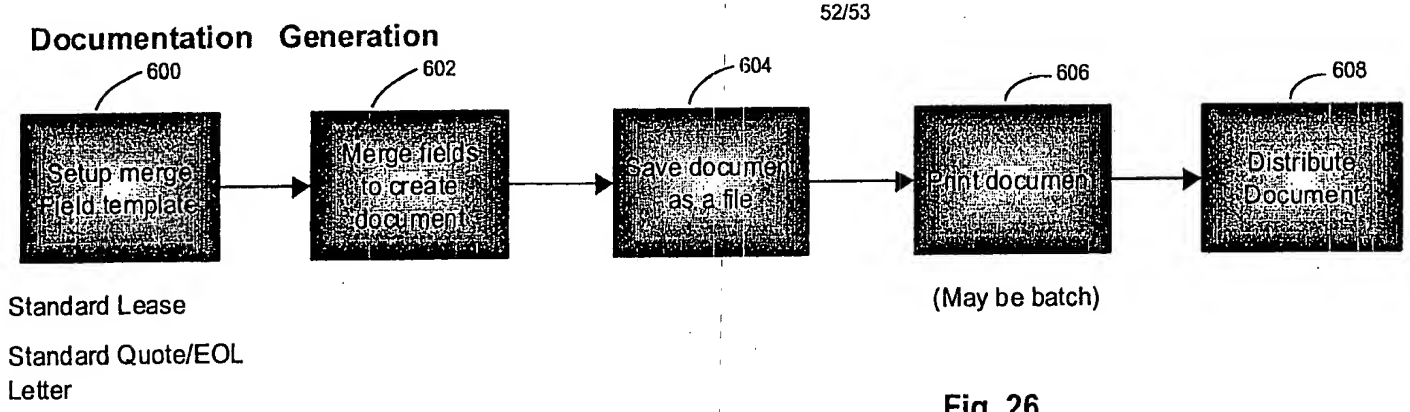

Documentation Generation
600
602
604
606
608
Setup merge field template
Merge fields to create document
Save document as a file
Print documen
Distribute Document
Standard Lease
Standard Quote/EOL Letter
(May be batch)

Fig. 26

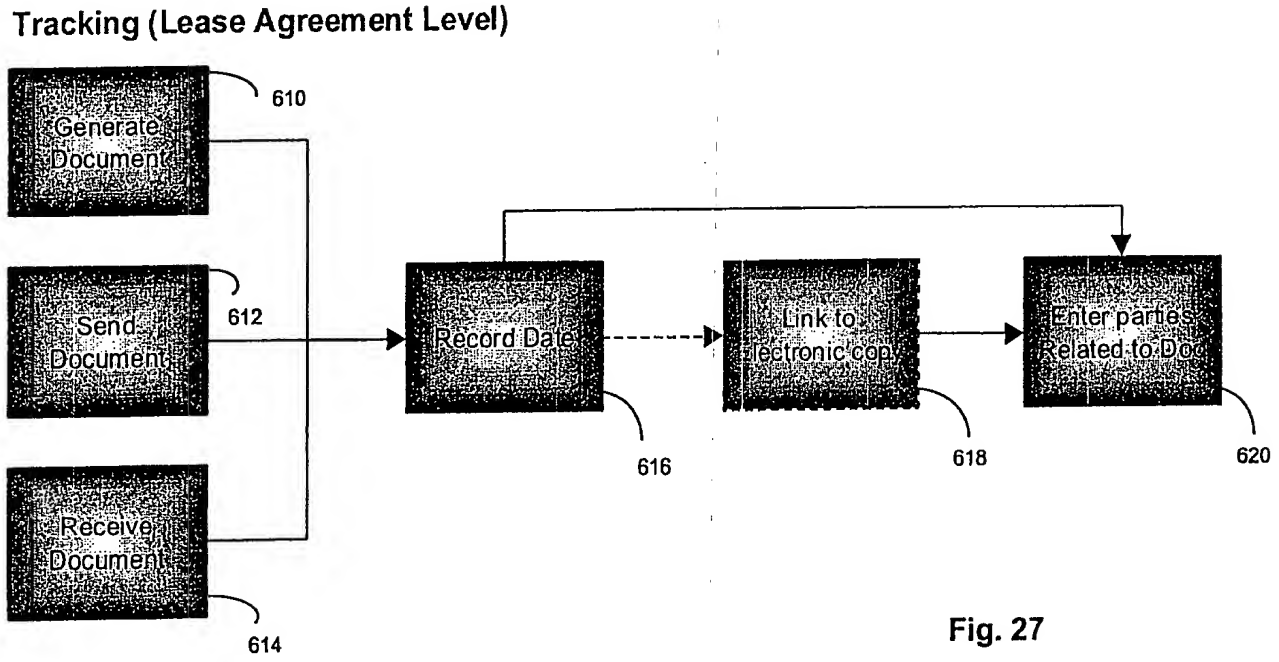
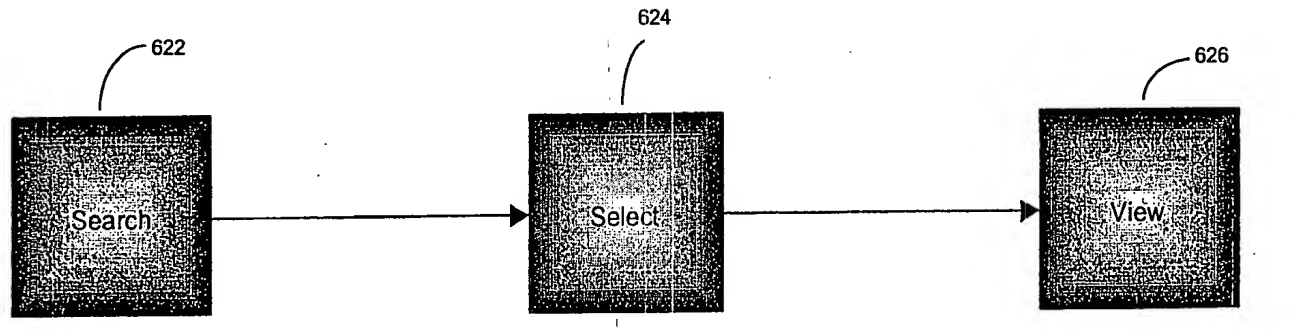

Tracking (Lease Agreement Level)
610
Generate Document
612
Send Document
Receive Document
614
Record Date
616
Link to electronic copy
618
Enter parties related to Doc
620

Fig. 27



By:

- Agreement
- Asset
- Customer

Income statement and balance sheet

Journal entries (at asset, customer, or lease level)

Billings, payments and open charges

Net Investment values

Fig. 28